

REPORT OF THE LEGISLATIVE RESEARCH COMMISSION
TO THE 1971 GENERAL ASSEMBLY

PESTICIDES

Raleigh, North Carolina

November 13, 1970

TO THE MEMBERS OF THE 1971 GENERAL ASSEMBLY

The Legislative Research Commission herewith reports to the 1971 General Assembly its findings and recommendations pursuant to House Resolution 1392 of the 1969 General Assembly, which directed the Commission "to study agricultural and other pesticides" and to report its findings and recommendations to the 1971 General Assembly.

This report was initiated by a Committee of the Legislative Research Commission to which the Commission assigned its study on pesticide control. The Committee on Pesticides consisted of:

Senator Elton Edwards, Chairman

Representative Liston B. Ramsey, Vice-Chairman

Senator Fred Folger, Jr.

Representative Thomas E. Strickland

Dr. Gerald Weekman, North Carolina State University,

Department of Entomology

Mr. Turner Battle, Executive Secretary, North Carolina

Wildlife Federation

Mr. Elmer Burt, tobacco farmer, Fuquay-Varina

Mr. Pink Francis, orchardist, Waynesville

The Legislative Research Commission reviewed the Committee proceedings and adopted this report on November 13, 1970.

Respectfully,

Philip P. Godwin, Speaker

Senator N. Hector McGeachy, Jr.

Co-Chairmen, Legislative Research Commission

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GLOSSARY

The members of the Legislative Research Commission and its Committee on Pesticides call your attention to the Glossary of Pesticide Terminology in Appendix B. We believe that you will find this glossary helpful, as we did, in understanding some of the technical terminology concerning pesticides.

REPORT OF THE LEGISLATIVE RESEARCH COMMISSION

TO THE 1971 GENERAL ASSEMBLY

PESTICIDES

Introduction

"For the first time in the history of the world, every human being is now subjected to contact with dangerous chemicals, from the moment of conception until death. In the less than two decades of their use, the synthetic pesticides have been so thoroughly distributed throughout the animate and inanimate world that they occur virtually everywhere. They have been recovered from most of the major river systems and even from streams of groundwater flowing unseen through the earth. Residues of these chemicals linger in soil to which they may have been applied a dozen years before. They have entered and lodged in the bodies of fish, birds, reptiles, and domestic and wild animals so universally that scientists carrying on animal experiments find it almost impossible to locate subjects free from such contamination. They have been found in fish in remote mountain lakes, in earthworms burrowing in soil, in the eggs of birds--and in man himself. For these chemicals are now stored in the bodies of the vast majority of human beings, regardless of age. They occur in the mother's milk, and probably in the tissues of the unborn child.

All this has come about because of the sudden rise and prodigious growth of an industry for the production of man-made or synthetic chemicals with insecticidal properties."*

In the eight years since Rachel Carson wrote these words, there has been a gathering momentum for a re-examination of the use of pesticides. Persistent and searching questions have been raised in many quarters--what are the hazards of using pesticides for fish life, for wildlife, and even for human life and health? How much do we know about the long range implications of the continued and growing use of pesticides? What is the economic stake--not only of the agricultural community and its associated busi-

* Rachel Carson, Silent Spring. Houghton Mifflin Company. Boston, 1962, pp. 15-16.

nesses and industries, but of the populace at large--in the continued use of pesticides? What is government doing to monitor, supervise and control the use of pesticides, and what more, if anything, should it do?

It was questions such as these that prompted the 1969 North Carolina General Assembly to adopt House Resolution 1392, directing the Legislative Research Commission "to study agricultural and other pesticides," and to report its findings and recommendations to the 1971 General Assembly.

In order to explore this subject in the depth that it merited we, the Legislative Research Commission, assigned the task of conducting hearings and making proposed findings and recommendations to a committee composed of members of the Research Commission supplemented by other legislators and interested citizens. The committee was selected to be broadly representative of the membership of the General Assembly and of the affected segments of the people of North Carolina. Thus, it included two Representatives and two Senators who served in the 1969 General Assembly, a tobacco farmer from the east, a fruit grower from the west, a prominent conservationist leader, and an entomologist at North Carolina State University who is professionally responsible for preparing recommendations concerning the use of pesticides. Chairman of the Committee was Senator Elton Edwards.

The Committee encountered much interest in the subject on the part of persons from all walks of public and private life. It held four days of hearings, and held internal working sessions for an additional seven days. At the hearings some 41 witnesses appeared before the Committee. These witnesses included 12 farmers and agricultural spokesmen, representing the farm community; nine

spokesmen for industry and businesses with a stake in the pesticide economy; 14 spokesmen for conservationist and ecological groups; and six other interested persons.

North Carolina is fortunately rich in talent in this field, and many experts gave freely of their time and ideas at our hearings. Our state has been represented on both of the two major recent national study groups concerning pesticides--the so-called "Mrak Commission" (named after the chairman of the HEW Commission on Pesticides) and the "NRC Report" (a report to the U. S. Department of Agriculture by the Committee on Persistent Pesticides of the National Academy of Sciences-National Research Council). North Carolina was represented on the Mrak Commission by Dr. Dan Okun, head of the UNC Department of Environmental Sciences and Engineering, and on the NRC Committee by Dr. Don Hayne, Professor of Zoology and Experimental Statistics at North Carolina State University. Both of these experts gave the Committee the benefit of their recommendations, as did Dr. Hans Falk, of the National Environmental Health Services Center at the Research Triangle, a leading research expert on the effects of pesticides on human health, particularly the potential carcinogenic and mutagenic effects of pesticides. The Committee also attended as special guests the first annual Roland McClamroch lecture at the 1970 Convention of the North Carolina Wildlife Federation, delivered by Dr. Charles Wurster, Chairman of the Scientists' Advisory Committee of the Environmental Defense Fund, concerning the effects of persistent pesticides upon the environment. Dr. Wurster also attended and participated in the subsequent Committee meetings.

We also received a transcript of a one-day hearing held in

October 1969 by N. C. Commissioner of Agriculture Graham and the Board of Agriculture on the subject of pesticides. (Following this hearing, and in light of the evidence adduced at the hearing, Commissioner Graham with the advice of an Interagency Pesticides Advisory Committee designated by him, issued an order on December 22, 1969, cancelling the North Carolina registration of DDT products and related persistent pesticides for uses on tobacco or shade trees, in aquatic environments, and in or around the home. (See Appendix D.)

In September, 1969, Dean Brooks James of the School of Agriculture and Life Sciences (hereafter "SALS") at North Carolina State University* created an Agricultural Chemical Advisory Committee, chaired by Dr. K. L. Knight of the Department of Entomology, and consisting of representatives from eleven departments and units in the School concerned with pesticides. This university committee met frequently during the same period when the Edwards Committee was at work, and it produced a set of comprehensive recommendations concerning pesticide control and programs that was presented to the Edwards Committee by Dean James. The Committee was greatly assisted in reaching its own conclusions by this carefully considered set of recommendations from North Carolina State University. (See Appendix C for SALS recommendations.)

An extensive report was prepared for the Committee by the Institute of Government concerning pesticide control programs and organizations in other states and in the Federal Government. The

* Dr. James is now serving as Vice-President of the University of North Carolina.

Institute also furnished other research materials and provided general staff assistance to the Committee.

SUBJECTS OF THE LEGISLATIVE STUDY

The Legislative Research Commission was specifically directed by House Resolution 1392 to study and report on the following topics:

- * The use of agricultural and other pesticides
- * The effects of pesticides on life, health and environmental quality, as well as their economic effects
- * Existing educational and governmental programs relating to pesticides
- * The need for monitoring pesticide use and effects
- * The need for legislation concerning control of pesticide use and other legislation concerning governmental programs relating to pesticides

Our findings on these topics are summarized in the remainder of this report.

FINDINGS

(1) Introduction

It may be helpful, preliminarily, to introduce our findings by reviewing some of the basic terminology concerning pesticides. (The Glossary in Appendix B contains a more detailed set of definitions.)

A pesticide or economic poison is a chemical used to cause the death of nonhuman organisms considered by man to be pests and includes herbicides, fungicides, insecticides, rodenticides, growth regulators and others.

Most pesticides now in use are synthetic organic compounds, but there are others found in nature, for example from plants (rotenone and pyrethrin), and the heavy metals (copper, arsenic, and sulfur).

The chlorinated hydrocarbons include the insecticides DDT and its breakdown products (metabolites) DDD or TDE and DDE; aldrin, with its relative dieldrin; and heptachlor, BHC, toxaphene, lindane, chlordane, and endrin. These compounds represent at present the most important economically, the most widely used, and the ones most often associated with environment pollution. Their half life is long, and they remain in the soil long after application--a characteristic which has led them to be called "hard" or "persistent" poisons.

Other synthetic insecticides include the organic phosphates, examples of which are malathion, parathion and TEPP. These differ from the "hard pesticides" in that they rapidly break down, usually into less toxic products, with a persistence in nature of

less than a year and for some just a few days. It is essential to note, though, that parathion and some other members of the group are highly toxic to non-target organisms and the human users of the chemical.

Several other major chemical categories of pesticides include the carbamate insecticides, fungicides and herbicides, the phenoxy herbicides including 2,4-D and 2,4,5-T and the triazine herbicides.

(2) The Use of Agricultural and Other Pesticides

Pesticides have a long history. But for our purposes the logical starting point is with the development and spread of synthetic pesticides since the late 1930's. The insecticidal properties of DDT were discovered in 1939; it was used in the field, mostly by the military, in the early 1940's, and became commercially available to the public as early as 1945. Similarly, plant hormones were objects of research in the late 1930's, and from these studies came the herbicide 2,4-D which was released almost simultaneously with DDT. Since the 1940's a major industry created to supply synthetic pesticides to agriculture and the general public has developed. More than 60,000 pesticide formulations based on 500 to 900 individual chemical compounds (estimates vary) have been developed for use in the United States.

The production and use of pesticides in the United States continues to grow in response to the demands of the users. Surveys and reports of government and industrial economists indicate that synthetic organic pesticide production is

increasing at approximately an annual rate of 15 percent with a forecast of more than \$3 billion sales by 1975. This is in contrast to increases of approximately 37 percent for the 5-year period, 1963 to 1967. The total dollar value of all pesticides produced in this country was \$440 million in 1964; this had increased to \$1.2 billion in 1969.

Herbicide sales, as indicated by U. S. Department of Agriculture surveys, have risen 271 percent since 1963 which represents more than double the rate of increase for all pesticides. Predictions have been made that insecticides will more than double in use by 1975 to more than \$600 million, while herbicide uses will increase to more than double that of insecticides (\$1 1/2 billion) during that same period. The value for all herbicides produced increased from \$200 million to \$800 million in a 5-year period from 1964 to 1969 and is predicted to reach \$1,350 million by 1974.

Presently there are approximately 4,500 known pesticide brands in North Carolina. Amounts of pesticides sold in the state are not presently available--an information gap which we seek to close through one of our recommendations (see "Regulation-Recommendation No. 2", below).

Unfortunately the growth in public awareness of pesticides and their use has not kept pace with the developments in industry, agriculture and public health. As a result, an information gap has developed around these new pesticides.

There has been over-use of pesticides in both agriculture and public health. Dusting or spraying operations have been and are still being conducted with the stated purpose of assuring against potential loss or product contamination by the pest. In many cases a more reasonable assessment of the potential infestation and more realistic food quality standards would have required considerably lesser amounts of pesticides.

Problems of use, over-use and misapplication of some chemicals and the disposal of unused chemicals and containers have reached the point where contamination of the environment is reaching significant proportions. The disposal of used containers is not unique to pesticides, but any pesticide package may contain significant amounts of a biologically active chemical.

(3) The Effects of Pesticides

(a) Effects on Human Life and Health

Man's exposure to persistent pesticides is the price of his use of these chemicals to protect his food and fiber. Residues of these chemicals have been, and are still being, acquired from various articles of diet and a variety of other environmental sources.

The consequences of prolonged pesticide exposures for human health are not fully known. Evidence from workers in the pesticide industry, who are subject to much greater exposure than is the general public, is reassuring but far from complete. Animal experiments clarify certain issues but the results cannot be automatically extended to man. On the basis of

present knowledge, the only verified consequences of long-term exposure to persistent pesticides, at the levels encountered by the general population, is the acquisition of residues in body tissues and fluids.

There appears to be no immediate danger to human health due to increased residues of persistent pesticides in the body and the environment in general, but there is concern on the part of scientists and public health officials concerning the long-term effects of pesticide pollution. Pesticides can injure, and in fact have injured, a variety of non-target animal species, among which are fish and wildlife. These animals may give a subtle indication of long-range direct or indirect effects of pesticides on man.

Known harmful effects on human health are caused by direct pesticide poisonings which occur primarily in areas where intensive agricultural pest control is practiced. Nation-wide, the recorded death rate in 1965 from poisonings associated with pesticides was 1.0 per one million population.

Most of these poisonings resulted from neglect, accident or misuse. Seven recent incidents outside of this state point up the acute hazard potential involved in pesticide use.

In a 1967 poisoning epidemic in Tijuana, investigated by Mexican officials, over 500 people reportedly became ill and 16 died as a result of contamination by parathion of ingredients in bread. In 1967, in Qatar and Saudi Arabia, 1,874 people were hospitalized and 26 died from eating bread made from flour

that had been stored in the holds of two ships under drums of endrin that leaked into the flour, In July 1969, in Texas, 23 farmworkers became ill two hours after they entered a cotton field that had been sprayed the previous evening with parathion. In a recent homicide in Florida, seven children died from parathion poisonings. Three men were made ill last year from exposure to arsenic while repairing equipment in a New Jersey pesticide plant. A father in Mississippi brought home a concentrated organophosphate insecticide last year to combat flies, sprinkled it liberally around the house, and as a result, he and two of his children were severely poisoned. In 1967 in a small nursery for newborns in St. Louis, 20 babies developed an unusual illness and two died from exposure to a sodium pentachlorophenate, a compound that had been used by mistake in laundering their diapers.

Unfortunately, it apparently is not necessary to look beyond the borders of North Carolina for similar incidents. Although the facts have not yet been clearly established as this report goes to press, there are indications, according to officials of the State Board of Health and the Department of Agriculture, that some 70 cases of illness and four deaths may have resulted during 1970 in North Carolina from poisoning following agricultural use of insecticides, including parathion. These incidents serve as unhappy reminders of the concern previously expressed by experts over the hazards that may be associated with shifting the emphasis from the use of the less toxic "hard pesticides" (such as DDT) to the use of the more toxic organic phosphorus pesticides.

(b) Effects on Environmental Quality

The general nature of the effects of persistent pesticides on nontarget species populations and communities can now be suggested. Each species reacts differently to specific pesticides. DDT, for example, causes egg shell thinning in ducks and falcons, but not in pheasants and quail. Pesticides from the air, water and soil are concentrated in the bodies of living organisms. The concentrating effect is frequently enhanced as one species of animal feeds on another and passes the pesticide from one link to another in a food chain. (This is sometimes referred to as "biological magnification.")

To illustrate the effect of "biological magnification": at Clearlake, California, TDE was applied to control a gnat in a fresh water environment.

When water contained	0.02 ppm TDE
plankton contained	10.00 ppm
plankton-eating fish contained	903.00 ppm
carnivorous fish contained	2690.00 ppm
and fish-eating birds contained	2134.00 ppm

Here the original pesticide concentration was magnified 100,000-fold.

In animal and plant communities exposed to pesticides, the total number of species may be reduced and the stability of populations within the community upset. A reduction in the number of species is usually followed by population explosions in some of the surviving species.

Persistence in pesticides may be both beneficial and harmful. Lasting residues provide control of target organisms over

long periods of time. However, these same residues may adversely effect nontarget animals and plants and they do contribute to food contamination. Persistence is measured by the time required for a loss of the pesticide's biological activity under normal environmental conditions and rates of application.

The introduction of pesticides into the environment is usually brought about by aerial or surface applications. In all cases, air is the medium through which pesticides move to their intended target. The information at hand indicates that pesticides do persist in the atmosphere at extremely low levels. Virtually nothing is known of the effects of atmospheric contamination.

The major pathway of pesticides into water occurs through the direct application to surface waters and from surface run-off in both rural and urban situations. Fish kills have resulted from normal agricultural use, from industrial wastes, from negligence, and from accidents. Of major concern is the potential harm that may result from the presence of minute but increasing amounts of pesticides in the earth's oceans.

The direct treatment of soil has led to its contamination by various pesticides. Soil residues are a cause for concern since they may affect man in a number of ways: uptake from soil by consumable crops, leaching into ground water, surface run-off, evaporation into the air, and by direct contact with soil. The magnitude of the problem is directly related to the amount of pesticide supplied to the soil and the rates of pesticide degradation in the soil. The problem can be minimized

by reducing the amounts of pesticides reaching the soil, by more effective application procedures and by using pesticides that have a low persistence.

(c) Economic Effects and Implications

Clearly, pesticides used on American farms have made a tremendous contribution to a relatively stable and inexpensive supply of high quality food, fiber and forest products for consumers. These chemicals have improved human health and made life more pleasant by controlling nuisance insects, plants and plant diseases. With effective pesticides, agriculture has been able to release other resources such as labor and capital for productive activities elsewhere in the economy.

Some of the more obvious "costs" of pesticides can be easily identified. Resources have been expended in developing and testing new chemicals. Costs to society are incurred when pesticides adversely affect other farmers, farm workers or food consumers, and these costs are important considerations in deciding if pesticides should be used.

The individual farmer does not know, nor does he have economic incentives to consider, all of these costs in his use decisions. He may compensate his neighbor for crop, livestock or human damage caused by pesticide drift. He can hardly compensate all food consumers, water users or nature lovers who may be adversely affected.

Since there are costs "external" to pesticide users and little chance for compensation, public regulations are often imposed. (In an economic sense these costs are said to be

"external" costs, in the sense that they are incurred by someone who did not cause them.) Ideally, regulations attempt to guide the use of chemicals to produce food and fiber with the minimum level of private and social cost. However, restrictions on chemical use can raise growers' costs. A recent study by the U. S. Department of Agriculture indicates that to replace most persistent insecticides used on cotton, corn, tobacco and peanuts would cost about \$2.25 per acre treated (same production level).

Additional information on the costs and benefits of pesticides is reflected in the transcripts of our public hearings.

(4) Existing Governmental Pesticides Programs

(a) Federal Control Programs

The principal existing Federal legislation on the subject is found in the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Federal Food, Drug, and Cosmetic Act (FDCA). Other legislation of some relevance includes air and water pollution control laws and meat inspection laws.

The FIFRA requires the registration of all pesticides, including insecticides, fungicides, rodenticides, etc., to be sold in interstate commerce. (Registration consists of approval of labels submitted by pesticide manufacturers or formulators, showing the nature of the product and the uses to which it will be put.) Under the original terms of the FIFRA, applications for registration were made with the U. S. Department of Agriculture and reviewed by the Departments of Interior and Health,

Education and Welfare, though the Department of Agriculture was not bound by their recommendations. Within recent months this arrangement has been under significant modification. Initially the roles of HEW and Interior were strengthened. More recently, the entire program has been transferred to the Environmental Protection Agency under an Executive Reorganization Order.

The FDCA of 1938 provides for establishment of tolerances for pesticide residues in food, although no complete set of standards has yet been developed thereunder. Under the Miller Amendment of 1954, agricultural commodities may be condemned as adulterated if they contain a residue of pesticides not exempted or which is present in excessive amounts. Under the "Delaney Clause" no material that is capable of causing cancer may be permitted in food. Under these two acts the United States Department of Agriculture and the Food and Drug Administration jointly operate to approve petitions for registration.

There have been a number of recent legislative and administrative developments at the Federal level.

NRC Report: In May, 1969, a report was made to the United States Department of Agriculture by the Committee on Persistent Pesticides of the National Research Council. The study that generated this report was made at the request of the National Academy of Sciences-National Research Council, beginning in late 1967. The NRC Report focused particularly on the effects of pesticide residues on the safety of food supplies, of man

and of the environment. The Committee's recommendations were largely long-range in nature and concentrated on research and monitoring needs.

Mrak Committee Report: In November, 1969, a report was made to the Secretary of Health, Education and Welfare by the Secretary's Commission on Pesticides, chaired by Dr. Emil Mrak. The study that generated this report was made by five sub-committees composed of the fifteen members of the full committee, supplemented by several advisory panels and HEW staff members.

The broad scope of the Mrak Report covered the entire field of uses and effects of pesticides. Its comprehensive recommendations included: eliminating all uses of DDT and DDD within two years, except those essential to human health or welfare; restricting other persistent pesticides to specific essential uses not hazardous to human health or environmental quality; requiring approval by the Secretaries of HEW and Interior, as well as Agriculture, for pesticide registrations; moderating the effect of the "Delaney Clause" by permitting the Secretary of HEW to determine when evidence of cancer producing capability justifies outlawing foods marketed in interstate commerce; and developing, in consultation with the Council of State Governments, model state regulations for collection and disposal of unused pesticides and used containers. A number of the Mrak Committee recommendations pointed toward state action as well as Federal action.

Other developments: Several important actions have occurred since the Mrak Report. First, on November 20, 1969, the USDA issued an order cancelling its registration of DDT for uses on tobacco, shade trees, aquatic environments and wetlands, and home uses excepting mosquito control. (This order has been appealed by six insecticide producers to the courts.) The United States Department of Agriculture also served notice of its intent to cancel any other uses of DDT not essential to human health and welfare. Second, the proposal for strengthened USDA-HEW-Interior cooperation has been at least partially implemented, and (as noted earlier) this would be superseded by the more recent Federal reorganization creating the Environmental Protection Agency. Third, environmental groups have filed two court actions against the Secretary of Agriculture to require that he take more drastic action to control the persistent pesticides and the herbicide 2,4,5-T. As of January 1971 the Secretary had lost two rounds in the courts in these cases. In E.D.F., Inc. v. Hardin* it was held that FIFRA authorizes the courts to directly review the Secretary's order denying suspension of registration of DDT. In E.D.F., Inc. v. Ruckelshaus**, on the next appearance of this case in court, it was held that the Secretary had failed to give sufficient reasons for denying suspension of registration. A somewhat similar result was reached in a proceeding involving 2,4,5-T in Wellford v. Ruckelshaus.***

*428 F 2nd 1093 (CA DC, 1970)

**2 ERC 1114 (CA DC, Jan. 1971)

***2 ERC 1123 (CA DC, Jan. 1971).

(b) Existing State Legislation

Most states, including North Carolina, have an insecticide, fungicide and rodenticide registration act that follows the general outlines of the 1947 Model Act of the Council of State Governments on this subject. These laws are aimed mainly at adulteration and mis-branding--that is, insuring that the consumer gets the product that he asks for. For the most part, these registration acts place little or no limitation upon the use of pesticides for the protection of the public or the environment. Under the state registration laws (including North Carolina's), once a pesticide has been registered for any purpose it may be sold and used not only for the registered purpose but for any other purpose. Thus, a restricted registration will not ordinarily have the effect of preventing the use of a pesticide for non-registered purposes.

If the states generally had enacted comprehensive use and application statutes, such laws together with the registration statutes might constitute a fairly complete regulatory scheme. Many states have enacted laws controlling some kinds of use and application of pesticides. However, in most cases these laws cover only a part of the problem. For example, North Carolina has a comprehensive occupational licensing law for structural pest control (e.g., termites) and a more limited licensing law for custom application of pesticides by aircraft. But North Carolina does not have any legislation regulating the general use of pesticides by the largest category of users,

farmers, nor regulating the sale of pesticides to these users.

Other state legislation may be of some utility in regulating the use of pesticides--e.g., air and water pollution control legislation and food inspection laws. In some instances these laws may have been actively used to deal with certain kinds of pesticide problems, for example, the North Carolina "fishkill law." But, at best, they only deal with a small part of the problem.

North Carolina's existing pesticides program is carried out by the North Carolina Department of Agriculture. The Department administers the pesticide registration and residue programs, the structural pest control law (through the Structural Pest Control Committee), and the aerial applicators law. Departmental personnel primarily involved in the program include the head of the Pesticides Section of the Analytical Division; six inspectors (half-time sampling pesticides and half-time sampling feed and fertilizer); three analytical chemists in the Departmental Laboratory (part-time on pesticides); and the State Chemist and State Entomologist (both part-time on pesticides.)

(c) Recent Developments in the States

North Carolina: Following the USDA lead, the North Carolina Department of Agriculture on December 22, 1969, announced that it will not register during 1970 the label of any DDT product for any of the USDA-cancelled uses. (In North Carolina and in most jurisdictions registration is an annual process.) The Department also announced that it did not intend to register

labels for uses on tobacco of DDD (TDE), aldrin, dieldrin, heptachlor, chlordane, and lindane.

North Carolina Agriculture Commissioner Graham in mid-1969 named an inter-agency State Pesticide Committee, including the State Directors of Health, Water-Air Resources, Conservation and Development, and the Wildlife Resources Commission; the Dean of Agriculture, Director of Research, and Director of Extension at North Carolina State University; the State Chemist; the head of the Consumer Protection Division of the Office of the Attorney General. The Board of Agriculture held a public hearing October 16, 1969, in response to a request by the North Carolina Wildlife Federation to prohibit use and sale of DDT in North Carolina and restrict sale of other persistent chlorinated hydrocarbons (aldrin, dieldrin, etc.) to licensed structural pest control operators. Originally it was anticipated that the Board of Agriculture would hold a series of hearings. However, since the announcement of the December 22 ban noted above, which appeared to meet the requests of the Wildlife Federation, no further hearings were held.

Other States: Strengthened pesticide controls are now under consideration in a number of states, and there have been some concrete developments on this front already. Among the more notable developments of the past several years are the following:

Administrative cancellation of registration for some purposes, for DDT or other persistent pesticides--California,

Illinois (legislation specifically authorizing cancellation), Michigan, New York.

Administrative prohibition of use of DDT or other persistent pesticides for some or all purposes, either temporarily or permanently--Alaska, Arizona, Connecticut.

Near absolute legislative "ban" on DDT--Wisconsin.

Legislative regulation, or guidelines, on discarding containers or disposing of pesticides--Connecticut, Michigan, Oregon, New York.

Legislation authorizing state agencies to issue new restrictions on the use or application of certain pesticides (such as a "restricted list" of persistent pesticides), or otherwise broadening the scope of controls--Florida, Maine, Maryland, New York, Virginia, Wisconsin, California.

Administrative limitations on use of DDT, or persistent pesticides generally, in state programs or on state lands--Minnesota, New Jersey.

Program reorganizations, tending toward broadening their originally agricultural basis--ranging from creation of broadly representative pesticide boards in several states to shifting of program responsibility from an agriculture department to a natural resources or conservation agency (New York, Wisconsin).

(5) Existing Educational Programs in North Carolina Concerning Pesticides

Present educational programs in this state relating to pesticide use safety are concentrated at North Carolina State University, with active instructional and extension programs.

Instructional programs in methods of pesticide use have evolved parallel to the development of pesticide use in agriculture and public health with numerous course offerings available in the four year curriculum. In the Agricultural Institute (a two-year technical program) special courses of study have been and continue to be developed to meet the needs of the people; examples are programs in Pest Control, Field Crop Technology and Soils Technology. The Agricultural Extension Service effort has been concentrated in the activities of a Pesticide Safety Education Team, a multi-discipline committee charged with the responsibility to develop and coordinate a safe use program for North Carolina. Pesticide research activities are also concentrated at the North Carolina State University campus, with less extensive programs at the University of North Carolina at Chapel Hill and other campuses. These educational programs are being continuously re-evaluated and redirected to meet the needs of the user public in the state.

(6) The Need for Monitoring Pesticide Use and Effects

Almost every witness who appeared before our study group agreed that it is desirable to have more extensive monitoring to detect the presence of pesticides in the environment, and especially to relate these findings to potential effects of pesticides on humans, animal life and plant life. It seems

apparent that the years of failure to detect the presence of pesticides and to identify their possible hazards have left strong feelings that more effective detection efforts are a "must." The clear weight of the evidence presented to us compels a finding that adequate pesticide monitoring activities in North Carolina should be maintained.

Two distinct kinds of laboratory pesticide detection and monitoring are carried on in North Carolina today. Research detection and monitoring is primarily a function of institutions of higher learning, such as the Pesticides Residue Research Laboratory (North Carolina State University), the Department of Environmental Sciences and Engineering (University of North Carolina, Chapel Hill), and the Water Resources Research Institute (University of North Carolina). Service detection--i.e., analyses and studies conducted in response to requests from farmers, industries, cities, etc.--has been primarily a function of State agencies such as the N. C. Department of Agriculture. (Other State agencies, such as the State Board of Health, the Wildlife Resources Commission and the Department of Water and Air Resources, have either conducted some pesticide detection activities or are seeking funds for this purpose.)

The evidence that we received points to findings that:

- * Research and service detection and monitoring serve distinct purposes and probably should continue to be separately administered respectively, by institutions of higher learning and State agencies.

- * Minimum laboratory facilities required for effective pesticide detection are quite expensive. (Basic equipment and space for a residue laboratory costs around \$250,000.) Especially if detection and monitoring activities are to increase, it is most desirable that every available economy be realized, through consolidation of facilities or otherwise.

(7) The Need for Legislation Concerning Control of Pesticide Use

(a) The Nature of the Need

There is a growing concern among many people over the impact of uncontrolled use of pesticides on mankind and on the environment. It is true that some questions about pesticides have been answered satisfactorily or placed in proper perspective since the first alarms were sounded. Yet the feeling persists that our technical ability to create evermore effective pesticides and our commercial ability to promote them may have outstripped our ability to perceive and cope with the adverse consequences of these chemicals. This Commission shares these feelings and concerns.

Dr. Don Hayne, the first technical witness to appear before the Pesticide Study Committee, aptly expressed this concern with respect to the DDT problem:

"Apprehension about the future effects of pesticides on wildlife and other natural population is often expressed with such emotion and exaggeration that it is easy to dismiss the whole matter as hysteria. Such dismissal is urged by some who should know better. There are however, certain stubborn facts which, I believe, prevent a responsible person from ignoring the problems of future contamination. Among such facts are these:

a. Contamination by DDT is now global in extent. Even though the levels in soil and in water are very low, . . . still the total quantities concerned must be tremendous due to the vastness of the reservoirs we have contaminated. A quarter century is less than an instant in the history of mankind; how long can we safely continue to add to this contamination?

b. Damage is occurring to at least a few segments of the biota at the present environmental contamination levels. It is true that thus far, solid scientific evidence has been accumulated for only a few cases It seems quite reasonable to suppose that an increase in levels of environmental contamination by DDT will lead to damage to more species.

c. While biochemists may speak with confidence about their test tube findings of degradation rates for DDT, still the facts of world-wide contamination by DDT show that their previous confident statements about breakdown rates of nature were misinformed. Until we have more reliable information on the breakdown rates for materials already stored in the ecosystem, it seems foolhardy to build up these stores when we know of no way to reduce them other than to let time pass

d. Knowledge of the effects on humans is very incomplete and in particular very little is known about long-term low-level exposure. With short-lived materials, if the deleterious effects on human health are discovered then the problem can soon be eliminated by stopping the use of the materials. This is not true with the long-lived materials, for even if we stop using them now, they will be with us for some unknown time into the future as environmental contaminants."*

(b) Gaps in Current Governmental Programs

To cope with this large and growing problem, we have now on the statute books federal and state pesticide registration and residue laws. Much good work is done in the administration of these statutes by responsible officials and by the experts from the land grant colleges who advise them. But essentially, these statutes are geared to informational objectives; they provide at best a weak foundation for regulatory programs. In the words of one witness at our hearings, this is a "leaky scheme of regulation."**

* Remarks of Dr. Don Hayne of N. C. State University before the Pesticide Study Committee of the Legislative Research Commission, January 23, 1970.

** Remarks of James Wallace before the Pesticide Study Committee of the Legislative Research Commission, April 18, 1970.

Among the gaps and holes that we have found in need of attention are the following:

- No existing statute effectively limits the use of pesticides in North Carolina. Once a pesticide has been registered for any purpose, it can legally be sold and used essentially without limitation, even for a purpose for which registration was refused. There is ample evidence that some effective restrictions upon pesticide use are needed.
- Misuse and misapplication of pesticides, along with careless disposal of unused pesticides and contaminated materials, are regarded by the experts as a major source of problems with pesticides. Yet our statutes make no provision respecting disposal, and do not control some of the major groups of pesticide applicators.
- Pesticide dealers are the principal or only source of advice for many pesticide users. Yet we have no statutes to assure that these dealers will be qualified to give advice or be held responsible for their advice.

There are those who feel that these gaps can best be filled, or will in any event be filled, by federal rather than state legislation. We doubt these premises. A strong case can be made that the state government should maintain an active role in pesticide management and control, especially for an agricultural state such as North Carolina. As to the likelihood of federal regulation, suffice it to say that no new federal legislation has yet emerged, and that in some matters it seems inherently unlikely that the Federal Government will ever act (e.g., licensing of pesticide dealers or applicators, comprehensive regulation of disposal).

Finally, our investigations persuade us that under any new pesticide legislation in North Carolina it will be desirable

to vest considerable discretion in an agency of state government that will have the confidence of people in all walks of life--farmers, city dwellers, businessmen, and conservationists alike.

RECOMMENDATIONS

Highlights of Principal Recommendations

An outline of our recommendations appears following these "highlights."

We are proposing significant new controls affecting pesticides, with emphasis on the regulation of dealers and applicators, together with restrictions on the use of pesticides and on the disposal of unused pesticides and contaminated containers. We do not propose an absolute legislative ban on any pesticide. We believe that the decision whether or not stringent or absolute restrictions are to be placed on any particular pesticide use should be made by an expert Pesticide Board.

We have found that the Commissioner of Agriculture has conducted a creditable pesticide management program with limited resources and minimal statutory powers. We believe that his office and the Department of Agriculture should continue to play an important role in the administration of pesticide programs. However, we believe that a broadly representative group can most effectively speak for all of the varied interests affected by the use of pesticides in adopting regulations and shaping policy concerning pesticides, having the flexibility to adapt them to changing conditions. Therefore, we are recommending the creation of a new Pesticide Board as a policy-making body in this field, representative of agriculture, public health, conservation, and the general public. In order to enjoy the confidence of the people generally, which is necessary for the Board

to have public acceptance, its membership should be appointed by the Governor.

It is obvious that expanded pesticide monitoring and research, as well as expanded education and training activities, will be essential to the success of the program we are recommending. Also essential will be increased staff to enforce and administer the new laws and regulations. All of these are vital in order to give substance and effectiveness to the strengthened controls and organizational changes that we have proposed.

We feel a responsibility to recognize in this report that new services and facilities cannot be provided without monies to pay for them. We have obtained the best estimates available of the added program costs inherent in our recommendations. Some of these costs can properly be borne by those who use, apply, manufacture, and formulate pesticides. Just as surely some of the costs should be borne by the general public whose demands for stronger pesticide control programs gave rise to our recommendations. We are therefore recommending that the necessary additional costs be met from a combination of General Fund appropriations and new or increased fees, without any new taxes.

These are the highlights of the program that we propose. The details of these and other recommendations are set forth below.

OUTLINE OF MAIN FEATURES OF RECOMMENDED PESTICIDE PROGRAM

Regulation

1. (a) Regulation of sale and use of restricted-use pesticides; (b) regulations to protect against drift and misapplication; (c) regulation of disposal of containers and unused pesticides; (d) prohibition of use or disposal of pesticides contrary to labels; (e) placing the burden of proof to justify safety of pesticides on applicants for registration or use permits; and (f) adoption of flexible effective dates on restrictions where feasible.
2. Licensing pesticide dealers who sell restricted use pesticides.
3. Licensing pesticide applicators (not including farmers on own land or to accommodate neighbors) and consultants.
4. Registration of employees of licensed dealers and applicators.
5. Incidental provisions on records-keeping, inspection, etc.
6. Repeal pesticide fair trade laws.

Organization

1. A new five-member Pesticide Board appointed by the Governor, representing State agriculture, conservation, and health agencies, and two other citizens--to make regulations and policy.
2. Continued administration and enforcement by Commissioner of Agriculture.
3. A new eleven-member Advisory Committee, for technical advice.

Monitoring, Staffing, etc.

1. Expanded education and training to implement new licensing and regulations.
2. Additional staffing for enforcement and administration of new programs.
3. Expanded research and monitoring.

Financing

1. Costs - Additional personnel and supporting services costs, approximately \$200,000 per year for biennium.
2. Revenues - (a) New and increased license and registration fees for approximately one-half of added costs. (b) General Fund appropriations, for approximately one-half of added costs.

SPECIFIC RECOMMENDATIONS

Organization and Administration

Recommendation No. 1:

We recommend the enactment of legislation creating a new five-member Pesticide Board, to be appointed by the Governor, consisting of representatives from three existing State Departments (Agriculture, Health and a conservation-oriented agency such as Wildlife Resources) and two citizens-at-large. Of the two at-large members, one should be a person directly engaged in agricultural production, and one should be chosen from some other field of endeavor. The Chairman should be selected by the Board from its members, and he should have the same voting rights as other Board members. Any action of the Board should require at least three concurring votes.

Recommendation No. 2:

We recommend that the Commissioner of Agriculture, through the State Department of Agriculture, continue to be responsible for administration and enforcement of North Carolina's pesticide control and management program.

Recommendation No. 3:

We recommend the enactment of legislation authorizing a new, relatively small Advisory Committee to consult and advise with the Pesticide Board and the Commissioner of Agriculture on technical questions and other matters. This Advisory Committee should reflect the various affected interests and concerns, and should be composed of persons having technical competence or other pertinent occupational qualifications. Specifically, we recommend an eleven-member Advisory Committee to be appointed by the Pesticide Board and to be composed of three members of the N. C. State University School of Agriculture and Life Sciences, one practicing farmer, and one member each representing the State Departments of Agriculture and Health, a State natural resources agency, agribusiness, the pesticide industry, a conservationist, and an ecologist.

We found the decisions on organization and administration of pesticide programs to be the most difficult and the most important decisions confronting us. On these questions

we received a variety of suggestions, ranging from continuing all decision-making powers in the Commissioner and Board of Agriculture to placing the entire program in some non-agricultural agency. There was a consensus though, on this point: that broad public confidence in the pesticide control agency would be essential to its success.

For this reason, we have recommended that administration and enforcement of pesticide programs continue to be functions of the Commissioner and Department of Agriculture, but that the adoption of regulations and shaping of policy concerning pesticide programs should be made a function of a new Pesticide Board. We believe that the Board must be broadly representative of affected segments of society, and that it should be small so that it can move promptly and effectively into the heart of its work. The composition that we have recommended for the Board was first suggested to us by the Agricultural Chemical Advisory Committee of the School of Agriculture and Life Sciences of N. C. State University.* We are confident that this proposal will meet with broad acceptance because it originated within a land grant institution which is concerned both with agricultural matters and with environmental and biological sciences. We were also encouraged by the expressed belief of the Commissioner of Agriculture that he could work with such a Pesticide Board (although, quite understandably, he would prefer that the function remain with the Board of Agriculture).

* On one detail our recommendation differs from that made by the N. C. State group--in spelling out general qualifications for the two at-large members of the Board.

In our consideration of this matter we were mindful of the pending proposals for reorganization of State Government in North Carolina and their thrust toward reduction in the number of State agencies. Because no concrete reorganization decisions had yet been determined, when we were preparing our report, it was not possible for us to recommend the location of the proposed pesticides program in a particular reorganized department. In any event we do not believe that the creation of the Pesticide Board would be a material departure from the principle of reduction of agencies, since the Pesticide Board would require no new facilities or independent staff, but only a secretary or administrative officer to keep minutes and help plan meetings.

We have proposed a relatively small Advisory Committee composed of technically competent persons to consult and advise with the Pesticide Board and Commissioner of Agriculture on technical and other matters. Although the creation and functioning of advisory committees could be left entirely to administrative discretion, in this case we believe it would be unwise for two reasons. First, time is of the essence for pesticide control in North Carolina, and the identification of this committee by statute will settle issues that might take a long time to resolve administratively. Second, previous experience with advisory committees suggests the wisdom of giving this committee statutory status if it is to be expected to function actively. It would be expected, however, that the Board or the Advisory Committee utilize consultants and other advisors or advisory groups as the need arises, from time to time.

Regulation

Recommendation No. 1:

We recommend the enactment of legislation authorizing the Pesticide Board to set up a pesticide management and control program. This legislation should include provisions:

- (a) Authorizing the Pesticide Board to adopt a list of restricted-use pesticides with attendant regulations and restrictions concerning use and sale;
- (b) Authorizing the Board to adopt other regulations concerning use and sale of all pesticides to protect against misapplication, drift and related problems;
- (c) Authorizing the Board to adopt regulations to insure proper disposal of unused pesticides, containers, and other contaminated materials;
- (d) Prohibiting the use of pesticides, or disposal of containers or unused pesticides, contrary to label instructions that are officially approved and incorporated in regulations of the Pesticide Board;
- (e) Providing for the burden of proof to justify safety of pesticides to be on the applicant for registration or for permits to use, apply or sell pesticides; and
- (f) Encouraging the Pesticide Board to delay effective dates of any use restrictions adopted where this is feasible and safe, so as to allow a reasonable period for phasing out of inventories.

Little or no support was expressed in our hearings for an absolute legislative ban on any particular pesticide. Rather, it was urged that, if a broad-based agency is created for pesticide control, this agency be authorized by statute to adopt and enforce regulations concerning the use and disposal of pesticides. This is the point of departure for our regulatory proposals for pesticide control. As was noted by one of

the scientific witnesses at our hearings,* "Administratively, it would be simple to ban the persistent pesticides, but this would deny us their use when such use can be justified, and thereby result in a greater economic burden on society. An investment in regulation and control, which costs more in administration than a simple ban, would permit a selective use of such pesticides where appropriate, with a minimum of associated hazards and a maximum benefit to the population."

Our recommendations contemplate that, in controlling pesticide use, the Pesticide Board would adopt a list of "restricted-use pesticides." This list would have attendant restrictions concerning use and sale, tailored to the particular chemical and its uses. Model legislation has been developed on these subjects by experienced administrators, and we have drawn on these model laws in drafting implementing bills which form a part of this report.

We have adopted a recommendation of the Commissioner of Agriculture to propose legislation prohibiting the use or disposal of pesticides contrary to label instructions, assuming that the labels have been reviewed and officially adopted in regulation form by the Pesticide Board. (The latter condition would be essential to avoid the unconstitutional delegation to private persons of the power to adopt regulations having criminal sanctions.) The Commissioner's proposal is designed

* Remarks of Dr. Dan Okun, Head of the Department of Environmental Sciences and Engineering (University of North Carolina, Chapel Hill) before the Pesticide Study Committee of the Legislative Research Commission, March 20, 1970.

not only to guard individuals against the consequences of misuse of pesticides, but also to simplify the administration of pesticide controls. If the State's pesticide inspectors can concentrate on preventing label instruction violations, it is hoped that an effective control program can be put in operation promptly and with much smaller forces than would be needed to police use restrictions directly on a state-wide basis. This at least, is the best advice of the Commissioner of Agriculture. We believe that this approach merits a trial. No alternative was suggested to us that offers hope of launching a control program at a cost within several orders of magnitude of our financing recommendations.

Various suggestions were made at our hearings to help cope with the problem of disposal of inventories of pesticides whose use has been substantially curtailed by restrictive regulations. Much as we might sympathize with formulators, manufacturers, dealers and wholesalers caught with unmarketable inventories, we do not believe that this matter can be directly resolved by legislation. We believe that the most that can be done by legislation is to leave the matter to administration, with words of encouragement for the administrator to try to ease the plight of the inventory-holder by delayed effective dates on pesticide use restrictions, if in good conscience this is feasible.

We believe it particularly important to assist the orderly administration of pesticide controls by placing the burden of proof to justify safety of pesticides squarely on the person

applying for registration or for permission to use, apply or sell pesticides, and we strongly so recommend. There is an abundance of evidence that the best information concerning the characteristics and effects of a particular pesticide is often in the hands of pesticide manufacturers, formulators and dealers--information which for their benefit they will undoubtedly make available to users and applicators. Placing the burden of proof of pesticide safety upon these persons will free State personnel to concentrate their time on other matters of vital importance to a successful pesticide control program.

Recommendation No. 2:

We recommend the enactment of legislation providing for the licensing of pesticide dealers who sell pesticides on the restricted list, and for necessary reporting of pesticide shipments and volumes by wholesalers, manufacturers, formulators and others.

Recommendation No. 3:

We recommend the enactment of legislation providing for the licensing of pesticide applicators and consultants. Licensing should cover commercial aerial applicators (already licensed), commercial ground applicators, other large-scale applicators (such as governmental units, utilities and carriers) and pest control consultants, but should not cover farmers applying pesticides on their own land or solely as an accommodation to their neighbors without pay. The effective existing licensing for structural pest control operators should, of course, be continued.

Recommendation No. 4:

We recommend that the proposed licensing laws for pesticide dealers and applicators should require registration of employees of the licensees who handle pesticides.

Recommendation No. 5:

We recommend that the proposed licensing and regulatory laws should include such incidental provisions (relating to such matters as recordkeeping, inspection, penal provisions, etc.) as needed to provide for an effective scheme of regulation.

Our second major regulatory recommendation is for the adoption of a comprehensive system of licensing laws for those who sell or apply pesticides or commercially dispense advice concerning pesticides.

We are recommending that a licensing system be initiated for dealers who sell pesticides on any restricted list, in order to introduce a measure of control at this critical point. Witnesses at our hearings generally agreed that the dealer is often the most important, if not the only, source of advice for many pesticide users. If North Carolina is to proceed by a program of selective regulation rather than absolute bans and prohibitions, it is essential that all critical points in the process of distribution and use be covered, including the dealers.

Dealer licensing is an important part of the over-all regulatory system that we are proposing--a regulatory system that also includes applicator licensing, restricted-use regulations and disposal regulations. The purposes of these several parts are interrelated and the success of one part (such as restricted-use or disposal regulation) may depend on effective functioning of another part (such as dealer licensing).

For example, the licensed dealer would be required to keep a list of customers to whom he sells restricted-use pesticides. Thus, if evidence came to light of an apparent violation of a restricted use regulation or a disposal regulation, the dealer's customer list might be the best source of information to help identify a violator.

North Carolina's licensing program for structural pest control is well-regarded, and its success encourages us to recommend extension of applicator licensing to pest control consultants, commercial ground applicators and other large scale applicators (such as State and local governments, and public utilities and carriers). The existing aerial applicator law should be strengthened, among other things, to require that liability insurance coverage for aerial applicators includes damages caused by pesticides.

We believe that farmers applying pesticides on their own land or for the accommodation of their neighbors without pay, should be exempted from applicator licensing. Every effort should be made to educate farmers concerning the dangers of pesticides, but it would not be necessary in the judgment of this Commission to apply applicator licensing to individual farmers.

Our recommendation for registration of the employees of licensed dealers and applicators does not contemplate an elaborate scheme of regulation and red tape. We propose only

that those employees who are to handle pesticides be "registered" (i.e., listed) with the licensing agency, and that they carry some kind of satisfactory identification as persons who handle pesticides. The licensee's self interest (e.g., in avoiding potential civil liability) should provide sufficient incentive to ensure the qualifications of these employees.

Recommendation No. 6:

We recommend the repeal of the Fair Trade Laws insofar as they apply to pesticides.

Evidence came to light in our hearings that the Fair Trade Laws may already serve as a vehicle for exacting monopolistic prices from pesticide users in North Carolina. If the application of Fair Trade Laws to pesticides is of doubtful wisdom now, it will grow increasingly harder to justify as the pesticide business becomes more highly regulated. The desirability of continuing to apply the Fair Trade Laws to pesticides was not demonstrated to us.

Monitoring, Research, Education and Staffing

Recommendation No. 1:

Expanded pesticide research and monitoring activities are highly desirable. We recommend that consolidation of the State's service monitoring functions be considered, in order to minimize overlapping services, and that pesticide research continue to be a function primarily of institutions of higher education.

Recommendation No. 2:

Expanded public education concerning pesticides is highly desirable. Expanded education and training for dealers, applicators, and their employees will obviously be necessary in order to make the proposed licensing systems workable. We urge that requests for funds for these purposes from institutions of higher learning be given serious consideration.

We urge that these recommendations be given a high priority and that every consideration be given to funding requests in support of pesticide monitoring, research, education and training. Lack of adequate information has been at the root of the pesticide problem; the need for better education, analysis and information will be even greater in the future.

As to the pesticide service monitoring and detection function, we believe that it would be economical to consolidate all of the State's laboratory facilities for this purpose in one place and that it might be feasible. We urge that this possible action be explored by the State.

A high level of expertise must be developed in the pesticide dealer-applicator business community. It is anticipated that appropriations will be sought to support a dealer-applicator training program to be coordinated through North

Carolina State University, and offered through the facilities of the University and the community colleges and technical institutes.

Recommendation No. 3:

We recommend that enforcement and administrative staff be expanded sufficiently to provide the minimum support needed for effective implementation of the new pesticide control program.

We asked the Commissioner of Agriculture to estimate the minimum additional staffing needs to carry out the program that we propose. His response is set forth in Appendix F. The level of staffing he estimates would put ten additional full-time inspectors in the field, and provide for an enforcement supervisor and necessary supporting technical and clerical staff. We recommend that this expansion of staff be approved for the coming biennium. It should be understood that this will not supply a staff large enough for direct, detailed state-wide enforcement of all the new programs proposed in this report. What it will hopefully support is a staff large enough to help man the new licensing programs, and to administer an enforcement policy that concentrates on preventing violations of label instructions.

Financing

Recommendation No. 1:

We recommend that additional personnel and supporting services be provided for the proposed pesticide control programs at an estimated annual cost of \$200,000 for the 1971-73 biennium.

Recommendation No. 2:

We recommend that the additional pesticide program costs be met by a combination of:

- (a) License and registration fee increases totalling approximately one-half of the projected amount, and
- (b) General Fund appropriation increases totalling approximately one-half of the projected amount.

It is estimated that the minimum additional staffing requirements projected by the Commissioner of Agriculture would cost upwards of \$250,000 per year, on a fully-staffed basis. Although we would recommend that the positions indicated by the Commissioner be established, we would anticipate that an average of 80% staffing, or around \$200,000 in annual additional expenses would be a more realistic expectation. Accordingly, we anticipate that approximately \$400,000 in actual new money expenditures will be needed to support the proposed program during the coming biennium.

In considering possible sources of revenue, we examined new taxes, license and registration fees, and general funds.

The Commissioner of Agriculture estimated that a tax at the rate of 1/2 of 1% of gross sales of pesticide formulators could generate the necessary revenues (approximately \$200,000 to \$250,000 per year). However, he did not recommend

that such a new tax be levied, nor do we believe it desirable.

It might be possible to extract all of the necessary funds from a system of license and registration fees and charges. The level of new and increased fees required, however, would not be competitive with other states (according to the Commissioner of Agriculture) and would be higher than we believe warranted. We believe that the general public properly should be asked to pay part of the program costs. Therefore, we are recommending the sharing of the additional expenses by a combination of General Fund appropriations and new or increased fees, without any new taxes. (See Appendix G.) The anticipated requirements for actual expenditures from the General Fund are projected to be about one-half of the total new program cost.

APPENDIX A.

HOUSE RESOLUTION 1392

NORTH CAROLINA GENERAL ASSEMBLY

1969 SESSION
HOUSE RESOLUTION 1392

Sponsors:

Representatives Carson, Boshamer, Bryan, Jones of
Mecklenberg, Rountree, Stevens, Strickland, and Twiggs.

Referred to: Calendar (Public).

1 June 24.

2 A HOUSE RESOLUTION DIRECTING THE LEGISLATIVE RESEARCH COMMISSION
3 TO STUDY AGRICULTURAL AND OTHER PESTICIDES AND TO REPORT ITS
4 FINDINGS AND RECOMMENDATIONS TO THE 1971 GENERAL ASSEMBLY.

5 Be it resolved by the House of Representatives:

6 Section 1. The Legislative Research Commission is
7 hereby directed to (a) study the use of agricultural and other
8 pesticides, and to study existing educational and governmental
9 programs relating to pesticides; (b) study and evaluate, insofar
10 as practicable, the effects of pesticides on life, health and
11 environmental quality, and the economic effects of pesticides;
12 (c) consider the need for monitoring the use and effects of
13 pesticides; and (d) consider the need for legislation concerning
14 the control of the use of pesticides and for other legislation
15 concerning governmental programs relating to pesticides.

16 Sec. 2. The Legislative Research Commission shall
17 report its findings and any recommendations resulting from this
18 study to the 1971 General Assembly.

APPENDIX B.

GLOSSARY OF PESTICIDE TERMINOLOGY

GLOSSARY OF PESTICIDE TERMINOLOGY

In General

The word "pesticide" means a pest killer. Some insects are pests. A pesticide that kills insects is an insecticide. A pesticide that kills weeds is a weedicide or a herbicide.

Specific Terms

ACTIVE INGREDIENT

That part of a chemical mixture which is directly responsible for killing insects, weeds, or other pests.

CONTACT HERBICIDE

A weed killer that destroys primarily by contact with the plant leaves and stem.

DEFOLIANT

A chemical which causes the leaves to drop from the plant.

DESICCANT

A chemical which causes the leaves to dry up.

EMULSIFIER

A chemical which helps keep one liquid mixed with another— as oil in water.

FUMIGATION

Using poisons in the form of gas to destroy pests.

FUNGICIDE

A chemical that kills fungi (molds). Some molds cause disease in plants.

HERBICIDE

Chemical weed killer.

INSECTICIDE

A chemical used to kill insects.

LEACHING

Movement of pesticides, etc., through soil when carried by water.

MISCIBLE

A substance that will mix with other substances-generally refers to liquids.

NOXIOUS WEEDS

A plant defined by law as being especially undesirable, and difficult to control.

PESTICIDE

Pest Killer (insects, weeds, fungi, rodents, and other undesirable plants and animals).

RESIDUAL PESTICIDE

Chemical sprays or dusts that remain on the plant, animal or structure to control disease or destroy insects, etc., for long periods (weeks or months).

RESIDUES

Chemicals remaining on the crops or in products after application.

RESISTANT

Describes insects, plants, etc., which due to natural selection will not be killed by normal rates of application of certain pesticides.

RODENTICIDE

Rodent killer (rats, mice, etc.)

SOIL STERILANTS

A long-lasting herbicide applied to the soil to prevent plant growth from a few weeks to several years.

SYSTEMIC INSECTICIDE

An insecticide that gets into the sap or blood and is transported through the plant or animal.

TOLERANCE

The safe amount of a pesticide that is permitted to remain in or on food for man or animal. Tolerances are established by legal regulations and are usually expressed in parts per million, abbreviated as PPM.

TOLERANT

Able to withstand herbicide or insecticide effects.

TOXIC

Poison, can kill insects, animals, or humans.

APPENDIX C.

RECOMMENDATIONS OF NORTH CAROLINA STATE

UNIVERSITY COMMITTEE

Recommendations to the Pesticide Study Committee of the Legislative
Research Commission

from
the School of Agriculture and Life Sciences, North Carolina State
University at Raleigh

I. Introduction

Pesticides are one of many kinds of environmental pollutants. There is ample evidence to support the view that certain pesticides have caused kills of fish and wildlife. One salient point should be kept clearly in mind: all pesticides are not alike. Their chemistry, persistence, and toxicity vary over very wide ranges; and a high percentage of the pesticides now available can be used safely without undue hazard to the environment. That pesticides are essential to efficient production of most crops and animals is an undebatable premise.

The persistent chlorinated hydrocarbon insecticides are the pesticides that have caused greatest concern. Two characteristics of these insecticides lead to their undesirable accumulation in the environment: (a) resistance to degradation and (b) solubility in fat. These characteristics explain the storage of DDT in animal fat.

Many of the problems caused by pesticides have resulted from misuse (rates of application higher than needed, applications more frequent than needed, and improper disposal of wastes); but normal, recommended uses, especially in the past, have also contributed.

Arguments have been offered for and against banning certain pesticides. We believe there are practical ways to control pesticide use without banning completely, and recommendations to follow will outline how we think this can be accomplished.

There are three arguments against complete banning of DDT by law:

(a) several uses of small amounts of DDT, chlordane, dieldrin, and related pesticides do not contribute significantly to environmental pollution nor do they pose unnecessary hazard to nontarget organisms, (b) we have no alternative methods for effective control of a few problem insects, and (c) hazards from diseases transmitted by insects loom over mankind. If a serious outbreak of malaria occurred, man might prefer DDT as the lesser of two evils. A ban of DDT by law would preclude its use for vector control.

II. Deliberations of the SALS Agricultural Chemicals Advisory Committee

This committee is broadly representative within the School of Agriculture and Life Sciences and also draws upon some individuals outside the university for advice. Representatives of the State Board of Health and the Department of Agriculture have been active as advisors and have contributed effectively. We have consulted on two occasions with representatives of the Southeastern Pesticide Formulators Association and with Dr. Milton Heath of the Institute of Government, University of North Carolina at Chapel Hill.

The committee has considered thoroughly many aspects of pesticide regulation. We have worked under the conviction (a) that the regulation of sale, use, and application of pesticides is desirable in North Carolina, (b) that licensing of dealers, applicators, and consultants is in the best interest of the people of North Carolina, (c) that laws should be designed to eliminate, as much as possible, misuse of pesticides without discouraging necessary legitimate use, (d) that laws that cannot be enforced are worse than no laws, and (e) that

excessively restrictive legislation or regulation would work to the disadvantage of agriculture and of the citizens of North Carolina from the standpoint of enforcement and cost.

Pesticide legislation is now administered in North Carolina by the Commissioner of Agriculture. Regulations under the laws now in effect are adopted by the Board of Agriculture. Individuals responsible for enforcement seek advice from several sources.

We have revised the "Model Use and Application Act," which was prepared by the Association of American Pesticide Control Officials, Inc., and the "Uniform State Insecticide, Fungicide, and Rodenticide Act," which was developed by the Council of State Governments and the Association of American Pesticide Control Officials, Inc. The latter act is similar to the "North Carolina Insecticide, Fungicide, and Rodenticide Act of 1947." Blank spaces were left at numerous places in the laws because we were unsure of the appropriate person or agency that should be designated. Twenty-one recommendations are given below. Supplementary information is appended.

III. Recommendations

1. That enforcement of pesticide laws in North Carolina be the responsibility of a new and separate division in the Department of Agriculture (see Appendix A for alternatives considered).

2. That the adoption of regulations under the pesticide laws be the responsibility of a five-member North Carolina Pesticide Board composed of department heads or their designated representatives, one member to be from a Natural Resource Agency in state government (Water and Air, Conservation and Development, or Wildlife Resources), one from the Department of Agriculture, one from the State Board of Health, and two members appointed by the governor from the citizenry at large; that one member be designated as chairman by the governor; that the designated chairman be a voting member; and further that regulations adopted, modified, or rescinded by the Pesticide Board require three affirmative votes (see Appendix B for alternatives considered).

3. That a Pesticide Advisory Committee be appointed by the chairman of the North Carolina Pesticide Board and that the Advisory Committee be constituted as follows:

Agribusiness	1 member
Pesticide Industry	1 member
Conservationist	1 member
Ecologist	1 member

Designated representatives of:

State Board of Health	1 member
A State Natural Resource Agency	1 member
Department of Agriculture	1 member
School of Agriculture and Life Sciences (NCSU)	3 members

That the responsibilities of this committee be to advise the North Carolina Pesticide Board and the enforcing division on all matters related to pesticides (see Appendix C for alternatives considered).

4. That consideration be given to enactment of a "Pesticide Use and Application Act". (Approved unanimously) (See Appendix D for suggested legislation)

5. That pesticide applicators, pest control consultants, and public operators, excluding extension personnel, be licensed under the "Pesticide Use and Application Act". That a separate license be required for ground and aerial applicators. (1 opposing vote)

6. That employees of pesticide applicators be registered with the enforcing official and be issued identification cards. (approved unanimously)

7. That a list of restricted-use pesticides be developed. (approved unanimously) (See Appendix E for an additional statement.)

8. That pesticide applicators be required to maintain records of all application and sale of restricted-use pesticides. (approved unanimously)

9. That provision be made for inspection of equipment and place of business of applicators. (approved unanimously)

10. That persons who apply pesticides to their own land or persons not expressly identified as pesticide applicators be exempt from the licensing requirement. (approved unanimously) (See Appendix E for additional statement.)

11. That licensing as now provided under the North Carolina Structural Pest Control Law not be affected by this Act. (approved unanimously)

12. That the "North Carolina Aerial Crop-Dusting Law" and the "North Carolina Insecticide, Fungicide, and Rodenticide Act" be repealed, providing that substitute laws are enacted. (approved unanimously)

13. That consideration be given to enactment of a "Pesticide Distribution, Sale, and Transportation Act" (to replace the "North Carolina Insecticide, Fungicide, and Rodenticide Act of 1947"). (approved unanimously) (See Appendix F for suggested legislation.)

14. That pesticide dealers be licensed under the "Pesticide Distribution, Sale, and Transportation Act". (approved unanimously)

15. That small package dealers, who sell pesticides not on the restricted-use list, and practicing DVM's and MD's be exempt from the requirement for a Dealer's license. (approved unanimously)

16. That all licensed dealers maintain records of restricted-use pesticides sold. (approved unanimously)

17. That all employees of licensed pesticide dealers, who engage in selling restricted-use pesticides, be registered with the enforcing official and be issued identification cards. (approved unanimously)

18. That the "North Carolina Food, Drug, and Cosmetic Act" be amended to provide the state officials the power of enforcement of tolerances, established

by the FDA, on intrastate shipments of raw agricultural commodities if these provisions are not now provided. (approved unanimously)

19. That funds be provided by the Legislature for training pesticide dealers and applicators. (approved unanimously)

20. That adequate funds be provided to the enforcing agency to carry out the provisions of these acts. (approved unanimously)

21. That consideration be given to the advisability of empowering the Pesticide Board to compensate injured persons for losses resulting from actions of that board in carrying out the provisions of these acts and that funds therefor be provided. (2 opposing votes)

APPENDIX D.

DECEMBER 1969 ORDER OF N. C. DEPARTMENT
OF AGRICULTURE

NORTH CAROLINA
DEPARTMENT OF AGRICULTURE
RALEIGH, N. C. 27602

December 22, 1969

NOTICE TO MANUFACTURERS, FORMULATORS, DISTRIBUTORS,
AND REGISTRANTS OF ECONOMIC POISONS

Attention: Persons Responsible for Registration of Economic Poisons
in North Carolina

CANCELLATION OF REGISTRATION OF DDT PRODUCTS FOR CERTAIN USES AND
CANCELLATION OF REGISTRATION OF DDD(TDE), ALDRIN, DIELDRIN, HEPTA-
CHLOR, CHLORDANE, AND LINDANE FOR USE ON TOBACCO IN NORTH CAROLINA.

The North Carolina Department of Agriculture will not register during 1970 the label of any DDT product containing any of the following uses which have been cancelled by the USDA:

1. All uses on shade trees, including elm trees for control of the elm bark beetle which transmits the Dutch elm disease.
2. All uses on tobacco.
3. All uses in or around the home except limited uses for control of disease vectors as determined by public health officials.
4. All uses in aquatic environments, marshes, wetlands, and adjacent areas, except those which are essential for the control of disease vectors as determined by public health officials.

In light of recent recommendations by the North Carolina State University's Pesticide Advisory Committee and/or the North Carolina Department of Agriculture's Pesticide Advisory Committee, the North Carolina Department of Agriculture also does not intend to register labels containing the uses of the following pesticides on tobacco: DDD(TDE), Aldrin, Dieldrin, Heptachlor, Chlordane, and Lindane.

Speakers appearing before the Subcommittee on Pesticides
of the Legislative Research Commission:

Barkalow, Dr. Fred S., North Carolina State University,
for North Carolina Wildlife Federation.

Barber, R. N., Waynesville, N. C., commercial apple grower.

Blalock, Dr. Carlton, North Carolina State University.

Blanton, Dr. Leonard, North Carolina Dept. of Agriculture.

Blum, Peter, President, North Carolina Seed Assn.

Brant, Frank, Highway Commission.

Buffaloe, Billy, Pesticide Research for North Carolina
Department of Agriculture.

Caldwell, Harry B., North Carolina Grange.

Cobb, Dr. William, North Carolina Dept. of Agriculture.

Coburn, Darwin, Water Pollution Control Division of
North Carolina Dept. of Water and Air Resources.

Constable, Dr. E. W., North Carolina Dept. of Agriculture.

Cooper, Dr. Arthur, Carolina Conservation Council.

Critcher, T. Stuart, Wildlife Resources Commission.

Darch, Douglas, North Carolina Dairyman.

Donaldson, Dr. W. E., North Carolina State University.

Dupree, Paul, Highway Commission.

Everette, B. B., Jr., President, North Carolina Cotton
Promotion Assn.

Falk, Dr. Hans, National Environmental Health Sciences
Center, Research Triangle Park.

Fox, Martin F., Chief Forester, Riegel Paper Corporation.

Graham, James A., North Carolina Commissioner of Agriculture.

Grady, Bob, N. C. Forest Service.

Speakers before Pesticide Subcommittee

Guthrie, Dr. F. E., North Carolina State University.

Hayne, Dr. Don W., North Carolina State University.

Hester, Dr. F. Eugene, Bureau of Sport Fisheries and Wildlife,
North Carolina State University.

James, Dr. Brooks, Dean, School of Agriculture and Life
Sciences, North Carolina State University.

Jenkins, Mr., speaking on problems concerning sweet potatoes.

Jones, George, State Entomologist.

Knight, Dr. Kenneth L., Chairman, Agricultural Chemicals
Advisory Committee, School of Agriculture and Life
Sciences of North Carolina State University.

Knight, W. E., Air Pollution Control Division of North
Carolina Dept. of Water and Air Resources.

Koomen, Dr. Jacob, Director, North Carolina State Board of
Health.

Leach, Alfred, Liquid Fertilizer Industry.

Lowe, Perry, Jr., Moravian Falls, N. C., apple grower.

May, Lester, Vice-President, North Carolina Pest Control
Assn.

Morgan, Paul, North Carolina Poultry Processing Assn.

Noble, G. N., President, North Carolina Horticultural Council, Inc.

Nusbaum, Dr. C. J., North Carolina State University.

Okun, Dr. Dan A., University of North Carolina, Chapel Hill.

Palmer, Joe, North Carolina Trellis Tomato Growers Assn.

Reitzel, John, Assistant Commissioner of Agriculture.

Ringer, Doug, replacing Dr. Thomas Linton, Fisheries

Commissioner of North Carolina.

Scriba, George T., Director, Regulatory Services, National

Agricultural Chemicals Assn.

Speakers before Pesticide Subcommittee

Sheet, Dr. T. J., Director of Pesticide Residue Research
Laboratory of North Carolina State University.

Sledge, John, Vice President, North Carolina Farm Bureau
Federation.

Spain, George E., North Carolina Dept. of Agriculture.

Teague, Carlisle, North Carolina Department of Agriculture.

Thigpen, Hassell, President, North Carolina Foundation Seed
Producers.

Wallace, Dr. James, President, WETlands and Estuaries for
Tomorrow.

Ware, Cameron, President, N. C. Apple Growers Assn.

Whitehurst, J. C., Coastal Chemical Company.

Williamson, Dr. J. C., Jr., North Carolina State University.

Wurster, Dr. Charles, State University of New York at Stony
Brook.

Zwiegart, Dr. Tom, North Carolina Dept. of Agriculture.

APPENDIX F.

MINIMUM ADDITIONAL STAFFING NEEDS

ESTIMATE BY COMMISSIONER OF AGRICULTURE OF MINIMUM ADDITIONAL
STAFFING REQUIREMENTS TO SUPPORT PROPOSED PESTICIDE PROGRAM

1	Administrative Enforcement Official (to supervise inspectors and pursue prosecution of violators)	\$ 12,000
4	Pesticide Chemists	\$ 40,000
1	Entomologist (to review labels -- to further regulate application methods and rates and to assist in dealer and applicator training)	\$ 10,000
1	Staff Member (label review responsibilities)	\$ 8,000
10	Inspectors (full time)	\$ 70,000
2	Stenographers	\$ 10,000
	Computerization Cost	?
	Supplies and Equipment	\$ 50,000
	Printing Cost	\$ 5,000
	Total	<hr/> \$ 205,000+

APPENDIX G.

RECOMMENDED SOURCES OF REVENUE FOR
PROPOSED PESTICIDE PROGRAM

RECOMMENDED FEES AND ESTIMATED REVENUES
FROM FEES FOR PROPOSED PESTICIDE PROGRAM

Pesticide License and Inspection Fees

Existing Fees	Proposed Increased Fees	Proposed New Fees
Registration	\$10.00	\$25.00
Applicator License		\$50.00
Aircraft Inspection		10.00
Ground Inspection		5.00
Dealer License		25.00
Employee Registration		1.00

Estimated Annual Revenues

	From Present Fees	From Proposed Fees (New or Increased)
Registration	\$45,000	\$ 90,000
Applicator License		17,500
Aircraft Inspection		1,250
Ground Inspection		3,750
Dealer License		25,000
Employee Registration		600
	<u>\$45,000</u>	<u>\$138,100</u>

APPENDIX H.

PROPOSED BILL
TO IMPLEMENT RECOMMENDATIONS

A BILL TO BE ENTITLED
AN ACT TO PROVIDE FOR THE PROTECTION OF THE QUALITY OF THE
ENVIRONMENT, AND FOR THE PROTECTION OF THE PUBLIC HEALTH
THROUGH THE REGULATION OF THE USE, APPLICATION, SALE, AND
DISPOSAL OF PESTICIDES AND THE REGISTRATION OF PESTICIDES.
The General Assembly of North Carolina do enact:

Section 1. G.S. Chapter 143 is hereby amended by adding
thereto a new article, to be numbered Article 52, and to read as
follows:

"Article 52.

"Pesticides Board

"Part 1. Pesticide Control Program: Organization and Functions

"§ 143-434. Short Title. This Article may be cited as the
North Carolina Pesticide Law of 1971.

"§ 143-435. Preamble.--(a) The Legislative Research Commission
was directed by House Resolution 1392 of the 1969 General
Assembly 'to study agricultural and other pesticides', and to
report its findings and recommendations to the 1971 General
Assembly. Pursuant to said Resolution a report was prepared and
adopted by the Legislative Research Commission in 1970 concerning
pesticides. In this report the Legislative Research Commission

made the following findings concerning the use and effects of pesticides and the need for legislation concerning control of pesticide use, of which the General Assembly hereby takes cognizance:

- (1) The use of chemical pesticides has developed since the 1940's into a major, new billion-dollar industry. Pesticides have bettered the lot of mankind in many ways and especially have assisted the farmer by their contribution to a stable and inexpensive supply of high quality food, fiber and forest products.
- (2) While pesticides have historically improved human health and have made life more pleasant by controlling nuisance insects and plants, evidence is accumulating that continuing use of persistent pesticides poses hazards to health and the environment. Environmental problems resulting from the use, over-use and misapplication of some chemicals, and the disposal of unused chemicals and containers, have grown to the point where contamination of the environment is approaching significant proportions. Proven damage to fish, birds and animals is occurring in some segments of the environment. There is concern among scientists and public health personnel about the long-term chronic effects of pesticide pollution on human health. Contamination by DDT has been shown to be global in extent. Moreover, recent experience in

North Carolina and elsewhere has shown that the more toxic but less persistent pesticides cannot safely be substituted for the persistent 'hard' pesticides without stringent safeguards.

- (3) Although some evidence of hazards to the environment and to health is accumulating, adequate information about pesticides and their effects is not available. More extensive monitoring should be maintained to detect the presence of pesticides in the environment and to relate these findings to potential effects on the environment and on human health.
- (4) No existing legislation in North Carolina effectively limits or controls the use of pesticides. Misuse and misapplication of pesticides, while effectively controlled by law with respect to structural pest control operators, is not adequately controlled with respect to some other major groups of pesticide applicators. Careless disposal of unused pesticides and contaminated containers is not controlled by law, and no North Carolina legislation requires that pesticide dealers, who are the principal source of advice for many pesticide users, be qualified to give advice or be held responsible for their advice. These gaps in legal control of pesticides are important and should be remedied.

(b) In furtherance of the findings and recommendations of the Legislative Research Commission, it is hereby declared to be the policy of the State of North Carolina that for the protection of the health, safety, and welfare of the people of this State, and for the promotion of a more secure, healthy and safe environment for all the people of the State, the future sale, use and application of pesticides shall be regulated, supervised and controlled by the State in the manner herein provided. Specifically, it is therefore declared to be the policy of the State to provide:

- (1) That future use of pesticides be controlled and regulated to ensure all applications thereof will be in accordance with the most recent findings, theories and techniques to safeguard the public interest;
- (2) That the chemical constituents and properties of pesticides will be carefully regulated for the protection of public health and safety and for environmental protection;
- (3) That pesticides sold, produced or used in North Carolina will be subject to close and accurate monitoring measurement;
- (4) That pesticides sold, produced or used in North Carolina shall be evaluated to determine the relative toxicity and their potential for environmental contamination, either by the pesticide or by its metabolites in the soils, waters, animal and plant life, general

environment and all other facets of the natural environment;

- (5) That sale, use and application of pesticides will be restricted, regulated or prohibited to safeguard the general public interest; and
- (6) That future application and sale of potentially harmful pesticides will be restricted to persons who have demonstrated sufficient competence, knowledge and training in the use thereof.

"§ 143-436. North Carolina Pesticide Board: creation and organization.--(a) There is hereby established the North Carolina Pesticide Board which, together with the Commissioner of Agriculture, shall be responsible for carrying out the provisions of this Article.

(b) The Pesticide Board shall consist of five members, to be appointed by the Governor, as follows:

- (1) One member each representing the North Carolina Department of Agriculture, the North Carolina Department of Health, and a State conservation agency. The persons so selected may be either members of a policy board or departmental officials or employees.
- (2) Two at-large members, one of whom shall be a person directly engaged in agricultural production, and one of whom shall be chosen from some other field of endeavor.

(c) The members of the Pesticide Board shall serve staggered four-year terms. Of the persons originally appointed, the members representing State Agencies shall serve two-year terms, and the two at-large members shall serve four-year terms. All members shall hold their offices until their successors are appointed and qualified. Any vacancy occurring in the membership of the Board prior to the expiration of the term shall be filled by appointment by the Governor for the remainder of the unexpired term. The Governor may at any time remove any member from the Board for gross inefficiency, neglect of duty, malfeasance, misfeasance, or nonfeasance in office. Each appointment to fill a vacancy in the membership of the Board shall be of a person having the same credentials as his predecessor.

(d) The Board shall select its chairman from its own membership, to serve for a term of two years. The chairman shall have a full vote. Any vacancy occurring in the chairmanship shall be filled by the Board for the remainder of the term. The Board may select such other officers as it deems necessary.

(e) Any action of the Board shall require at least three concurring votes.

(f) The members of the Board who are not officers or employees of the State shall receive for their services the per diem and compensation prescribed in G.S. 138-5.

"§ 143-437. Pesticide Board: functions.--The Pesticide Board shall be the governing board for the programs of pesticide management and control set forth in this Article. The Pesticide Board shall have the following powers and duties under this Article:

(1) To adopt rules and regulations and make policies for the programs set forth in this Article.

(2) To carry out a program of planning and of investigation into long-range needs and problems concerning pesticides.

(3) To collect, analyze and disseminate information necessary for the effective operation of the programs set forth in this Article.

(4) To provide professional advice to public and private agencies and citizens of the State on matters relating to pesticides, in cooperation with other State agencies, with professional groups, and with North Carolina State University and other educational institutions.

(5) To accept gifts, devises and bequests, and with the approval of the Governor to apply for and accept grants from the Federal Government and its agencies and from any foundation, corporation, association or individual, and may comply with the terms, conditions and limitations of the grant, in order to accomplish any of the purposes of the Board, such grant funds to be expended pursuant to the Executive Budget Act.

(6) To inform and advise the Governor on matters involving pesticides, and to prepare and recommend to the Governor and the General Assembly any legislation which may be deemed proper for the management and control of pesticides in North Carolina.

(7) To make annual reports to the Governor and to make such other investigations and reports as may be requested by the Governor or the General Assembly.

"§ 143-438. Commissioner of Agriculture to administer and enforce Article.--The Commissioner of Agriculture shall have the following powers and duties under this Article:

- (1) To administer and enforce the provisions of this Article.
- (2) To attend all meetings of the Pesticide Board, but without power to vote (unless he be designated as the ex officio member of the Board from the Department of Agriculture).
- (3) To keep an accurate and complete record of all Board meetings and hearings, and to have legal custody of all books, papers, documents and other records of the Board.
- (4) To assign and reassign the administrative and enforcement duties and functions assigned to him in this Article to one or more of the divisions and other units within the Department of Agriculture.
- (5) To direct the work of the personnel employed by the Board and of the personnel of the Department of Agriculture who have responsibilities concerning the programs set forth in this Article.
- (6) To delegate to any division head or other officer or employee of the Department of Agriculture any of the powers and duties given to the Department by statute or by the rules, regulations and procedures established pursuant to this Article.
- (7) To perform such other duties as the Board may from time to time direct.

"§ 143-439. Pesticide Advisory Committee: creation and functions.--(a) There is hereby authorized the establishment of the Pesticide Advisory Committee, which shall assist the Board and the Commissioner in an advisory capacity on matters which may

be submitted to it by the Board or the Commissioner, including technical questions and the development of rules and regulations.

(b) The Pesticide Advisory Committee shall consist of eleven members to be appointed by the Board, as follows:

One practicing farmer

One conservationist (at large)

One ecologist (at large)

One representative of the pesticide industry

One representative of agri-business (at large)

Three members of the North Carolina State University

School of Agriculture and Life Sciences

One member each representing the North Carolina Department of Agriculture, the North Carolina Department of Health and a State conservation agency.

(c) Members of the Pesticide Advisory Committee shall serve at the pleasure of the Board. The members who are not officers or employees of the State shall receive regular State subsistence and travel expenses.

"Part 2. Regulation of the Use of Pesticides

"§ 143-440. 'Restricted-use pesticides' regulated.--(a) The Board may, by regulation after a public hearing, adopt and from time to time revise a list of restricted use pesticides for the State or for designated areas within the State. The Board may designate any pesticide as a 'restricted-use pesticide' upon the grounds that, in the judgment of the Board, it either:

- (1) Persists in the environment, or accumulates as either the pesticide per se, a pesticide

metabolite, or a pesticide degradation product in plant or animal tissue or product, and is not excreted or eliminated within a reasonable period of time, and which may be transferred to other forms of life; and which by virtue of such persistence or accumulation creates a present or future risk of harmful effects on any organism other than the target organisms; or

- (2) Is so hazardous to man or other forms of life that restrictions on its sale, purpose, use, or possession are necessary.

(b) The Board may include in any such restricted-use regulation the time and conditions of sale, distribution, or use of such restricted-use pesticides; may prohibit the use of any restricted-use pesticide for designated purposes or at designated places or times; may require the purchaser or user to certify that restricted-use pesticides will be used only for the uses established by regulations; and may, if it deems it necessary to carry out the provisions of this Part, require that any or all restricted-use pesticides shall be purchased, possessed, or used only under permit of the Board and under its direct supervision in certain areas and/or under certain conditions or in certain quantities or concentrations except that any person licensed to sell such pesticides may purchase and possess such pesticides without a permit. The Board may require all persons issued such permits to maintain records as to the use of the restricted-use pesticides.

"§ 143-441. Handling, storage and disposal of pesticides.-- (a)

The Board may adopt regulations:

- (1) Concerning the handling, transport, storage, display or distribution of pesticides, and concerning the disposal of pesticides and pesticide containers.
- (2) Restricting or prohibiting the use of certain types of containers or packages for specific pesticides. These restrictions may apply to type of construction, strength, and/or size to alleviate danger of spillage, breakage, or misuse.

(b) No person shall handle, transport, store, display, or distribute pesticides in such a manner as to endanger man and his environment or to endanger food, feed, or any other products that may be transported, stored, displayed, or distributed with pesticides, or in any manner contrary to the regulations of the Board.

(c) No person shall dispose of, discard, or store any pesticides or pesticide containers in such a manner as may cause injury to humans, vegetation, crops, livestock, wildlife, or to pollute any water supply or waterway, or in any manner contrary to the regulations of the Board.

"§ 143-442. Registration.-- (a) Every pesticide prior to being distributed, sold, or offered for sale within this State or delivered for transportation or transported in intrastate commerce or between points within this State through any point outside this State shall be registered in the office of the Board, and such registration shall be renewed annually. The

applicant for registration shall file with the Board a statement including:

- (1) The name and address of the applicant and the name and address of the person whose name will appear on the label, if other than the applicant;
- (2) The name of the pesticide;
- (3) A complete copy of the labeling accompanying the pesticide and a statement of all claims to be made for it including directions for use; and
- (4) If requested by the Board a full description of the tests made and the results thereof upon which the claims are based. In the case of renewal of registration, a statement shall be required with respect to information which is different from that furnished when the pesticide was registered or last reregistered.

(b) The applicant shall pay an annual fee of \$25.00 for each pesticide registered. A \$50.00 delinquent registration penalty shall be assessed against the registrant for any pesticide which is marketed in North Carolina prior to registration as required by this Article.

(c) The Board, when it deems necessary in the administration of this Article, may require the submission of the complete formula of any pesticide.

(d) If it appears to the Board that the composition of an article is such as to warrant the proposed claims for it and if the article and its labeling and other material required to be submitted comply with the requirements of G.S. 143-443 the Board

shall register the article. If it does not appear to the Board that the article is such as to warrant the proposed claims for it or if the article and its labeling and other material required to be submitted do not comply with the provisions of this Part, it shall notify the applicant of the manner in which the article, labeling, or other material required to be submitted fail to comply so as to afford the applicant an opportunity to make the necessary corrections. If upon receipt of such notice, the applicant does not make the corrections, the Board may refuse to register the article. The Board, in accordance with the procedures specified herein, may suspend or cancel the registration of a pesticide whenever it does not appear that the article or its labeling complies with the provisions of this Part. Whenever an application for registration is refused or the Board proposes to suspend or cancel a registration, notice of such action shall be given to the applicant or registrant who shall, within ten days of receipt of such notice, request a hearing on the proposed action of the Board, as provided in G.S. 143-464.

(e) Notwithstanding any other provisions of this Part, registration is not required in the case of a pesticide shipped from one plant within this State to another plant within this State operated by the same person.

"§ 143-443. Miscellaneous prohibited acts.--(a) It shall be unlawful for any person to distribute, sell, or offer for sale within this State or deliver for transportation or transport in intrastate commerce or between points within this State through any point outside this State any of the following:

- (1) Any pesticide which has not been registered pursuant to the provisions of G.S. 143-442, or any pesticide if any of the claims made for it or any of the directions for its use differ in substance from the representations made in connection with the registration, or if the composition of a pesticide differs from its composition as represented in connection with its registration: except that, in the discretion of the Board, a change in the labeling or formula of a pesticide may be made within a registration period without requiring reregistration of the product.
- (2) Any pesticide unless it is in the registrant's or the manufacturer's unbroken immediate container, and there is affixed to such container, and to the outside container or wrapper of the retail package, if there be one through which the required information on the immediate container cannot be clearly read, a label bearing:
 - (i) The name and address of the manufacturer, registrant, or person for whom manufactured;
 - (ii) The name, brand, or trademark under which said article is sold; and
 - (iii) The net weight or measure of the content subject, however, to such reasonable variations as the Board may permit.
- (3) Any pesticide which contains any substance or substances in quantities highly toxic to man,

determined as provided in G.S. 143-444, unless the label shall bear, in addition to any other matter required by this Part:

- (i) The skull and crossbones;
 - (ii) The word 'poison' prominently, in red, on a background of distinctly contrasting color; and
 - (iii) A statement of an antidote for the pesticide.
- (4) The pesticides commonly known as standard lead arsenate, basic lead arsenate, calcium arsenate, magnesium arsenate, zinc arsenate, zinc arsenite, sodium fluoride, sodium fluosilicate, and barium fluosilicate unless they have been distinctly colored or discolored as provided by regulations issued in accordance with this Part, or any other white or lightly colored pesticide which the Board, after investigation of and after public hearing on the necessity for such action for the protection of the public health and the feasibility of such coloration or discoloration, shall, by regulation, require to be distinctly colored or discolored; unless it has been so colored or discolored, provided, that the Board may exempt any pesticide to the extent that it is intended for a particular use or uses from the coloring or discoloring required or authorized by this section if the Board determines that such coloring or discoloring for

such use or uses is not necessary for the protection of the public health.

- (5) Any pesticide which is adulterated or misbranded, (or any device which is misbranded).
- (6) Any pesticide in containers violating regulations adopted pursuant to G.S. 143-441. Pesticides found in containers which are unsafe due to damage or defective construction may be seized and impounded.

(b) It shall be unlawful:

- (1) For any person to detach, alter, deface, or destroy, in whole or in part, any label or labeling provided for in this Part or regulations promulgated hereunder, or to add any substance to, or take any substance from a pesticide in a manner that may defeat the purpose of this Part;
- (2) For any person to use for his own advantage or to reveal, other than to the Board or proper officials or employees of the State or to the courts of this State in response to a subpoena, or to physicians, or in emergencies to pharmacists and other qualified persons, for use in the preparation of antidotes, any information relative to formulas of products acquired by authority of G.S. 143-442.

"§ 143-444. Determinations.--The Board is authorized:

- (1) To declare as a pest any form of plant or animal life or virus which is injurious to plants, men, domestic animals, articles, or substances;

(2) To determine whether pesticides are highly toxic to man;
and

(3) To determine standards of coloring or discoloring for pesticides, and to subject pesticides to the requirements of G.S. 143-443(a) (4) .

"§ 143-445. Exemptions.--(a) The penalties provided for violations of G.S. 143-443(a) shall not apply to:

- (1) Any carrier while lawfully engaged in transporting pesticides within this State, if such carrier shall, upon request, permit the Board or its designated agent to copy all records showing the transactions in and movement of the articles;
- (2) Public officials of this State and the Federal Government engaged in the performance of their official duties;
- (3) The manufacturer or shipper of a pesticide for experimental use only,
 - (i) By or under the supervision of an agency of this State or of the Federal Government authorized by law to conduct research in the field of pesticides, or
 - (ii) By others if the pesticide is not sold and if the container thereof is plainly and conspicuously marked 'For experimental use only - Not to be sold', together with the manufacturer's name and address; (except that if a written permit has been obtained from the Board, pesticides may be sold for experimental

purposes subject to such restrictions and conditions as may be set forth in the permit).

(b) No article shall be deemed in violation of this Part when intended solely for export to a foreign country, and when prepared or packed according to the specifications or directions of the purchaser. If not so exported, all the provisions of this Part shall apply.

"§ 143-446. Samples; submissions.--(a) The Board, or its agent, is authorized and directed to sample, test, inspect and make analyses of pesticides sold or offered for sale or distributed within this State, at time and place and to such an extent as it may deem necessary to determine whether such pesticides are in compliance with the provisions of this chapter. The Board is authorized to adopt regulations concerning the collection and examination of samples (or devices), and to adopt regulations establishing tolerances providing for reasonable deviations from the guaranteed analysis.

(b) The official analysis shall be made from the official sample. A sealed and identified sample, herein called 'official check sample' shall be kept until the analysis is completed on the official sample, except that the registrant may obtain upon request a portion of said official sample. If the official analysis conforms with the provisions of this Part, the official check sample may be destroyed. If the official analysis does not conform with the provisions of this Part, then the official check sample shall be retained for a period of 90 days from the date of the certificate of analysis of the official sample.

(c) The Board, of its own motion or upon complaint, may cause an examination to be made for the purpose of determining whether any pesticide complies with the requirements of this Part. If it shall appear from such examination that a pesticide fails to comply with the provisions of this Part, the Board may cause notice to be given to the offending person in the manner provided in G.S. 143-464, and the proceedings thereupon shall be as provided in such section; provided that pesticides may be seized and confiscated as provided in G.S. 143-447.

(d) The Board shall, by publication in such manner as it may prescribe, give notice of all judgments entered in actions instituted under the authority of this Article.

"§ 143-447. Emergency suspensions; seizures.--(a) Notwithstanding any other provision of this Article, the Board may, when it finds that such action is necessary to prevent an imminent hazard to the public, or any other nontarget organism or segment of the environment, by order, suspend the registration of a pesticide immediately. In such case, it shall give the registrant prompt notice of such action and afford the registrant the opportunity to have the matter submitted to an advisory committee and for an expedited hearing. Final orders of the Board under this Part shall be subject to review as provided for in G.S. 143-464. Such review shall be instituted within 30 days after receipt by the applicant for registration or registrant of the Board's order. In no event shall registration of a pesticide be construed as a defense to any charge of an offense prohibited under this Article.

(b) It shall be the duty of the Board to issue and enforce a written or printed 'stop sale, stop use, or removal' order to the owner or custodian of any lot of pesticide and for the owner or custodian to hold said lot at a designated place when the Board finds said pesticide is being offered or exposed for sale in violation of any of the provisions of this Article until the law has been complied with and said pesticide is released in writing by the Board or said violation has been otherwise legally disposed of by written authority. The Board shall release the pesticide so withdrawn when the requirements of the provisions of this Article have been complied with and upon payment of all costs and expenses incurred in connection with the withdrawal. The registrant of a pesticide found deficient in active ingredients shall be subject to a penalty for the deficiency. The deficiency penalty shall be three times the percentage deficiency times the retail value as established by the consignee at the time of sampling, but not less than \$25.00.

(c) Any pesticide (or device) that is distributed, sold, or offered for sale within this State or delivered for transportation or transported in intrastate commerce between points within this State through any point outside this State shall be liable to be proceeded against in superior court in any county of the State where it may be found and seized for confiscation by process or libel for condemnation:

(1) In the case of a pesticide,

(i) If it is adulterated or misbranded,

(ii) If it has not been registered under the provisions of G.S. 143-442,

(iii) If it fails to bear on its label the information required by this Part,

(iv) If it is a white or lightly colored pesticide and is not colored as required under this Part.

(2) In the case of a device, if it is misbranded.

(d) If the article is condemned, it shall, after entry of decree, be disposed of by destruction or sale as the court may direct and the proceeds, if such article is sold, less legal costs, shall be paid to the State Treasurer; provided that the article shall not be sold contrary to the provisions of this Part; and provided further that upon payment of costs and execution and delivery of a good and sufficient bond conditioned that the article shall not be disposed of unlawfully, the court may direct that said article be delivered to the owner thereof for relabeling or reprocessing or disposal, as the case may be.

(e) When a decree of condemnation is entered against the article, court costs and fees and storage and other proper expenses shall be awarded against the person, if any, intervening as claimant of the article.

"Part 3. Pesticide Dealers and Manufacturers

"§ 143-448. Licensing of pesticide dealers; fees.--(a) No person shall act in the capacity of a pesticide dealer, or shall engage or offer to engage in the business of, advertise as, or assume to act as a pesticide dealer unless he is licensed annually as provided in this Part. A separate license and fee shall be obtained for each location or outlet from which

restricted use pesticides are distributed, sold, held for sale, or offered for sale.

(b) Applications for a pesticide dealer license shall be in the form and shall contain the information prescribed by the Board. Each application shall be accompanied by a fee of \$25.00. All licenses issued under this Part shall expire on December 31 of the year for which they are issued.

(c) The license for a pesticide dealer may be renewed annually upon application to the Board, accompanied by a fee of \$25.00 for each license, on or before the first day of January of the calendar year for which the license is issued.

(d) If an application for renewal of a pesticide dealer's license is not filed on or before January 1 of any year, a penalty of 25% of the renewal fee shall be assessed and added to the fee, and shall be paid by the applicant before the renewal license is issued, but such penalty shall not apply if the applicant furnishes an affidavit that he has not distributed, sold, held for sale or offered for sale any restricted use pesticide subsequent to the expiration of his prior license.

(e) Every licensed pesticide dealer who changes his address or place of business shall immediately notify the Board.

(f) The Board shall issue to each applicant that satisfies the requirements of this Part a license which entitles the applicant to conduct the business described in the application for the calendar year for which the license is issued, unless the license is sooner revoked or suspended.

"§ 143-449. Qualifications for pesticide dealer license; examinations.--(a) An applicant for a license must present

evidence satisfactory to the Board concerning his qualifications for such license. The basic qualifications shall be:

- (1) Two years as an employee or owner-operator in the field of pesticide sales. One or more years training in pesticides and control of pests under university or college supervision may be substituted for practical experience. Each year of such training may be substituted for one year of practical experience; or
- (2) A degree from a recognized college or university with training in entomology, plant pathology, weed science or related subjects including sufficient practical experience in pesticide use under proper supervision.

(b) Each applicant shall satisfy the Board as to his responsibility in carrying on the business of a pesticide dealer. Each applicant for an original license must demonstrate upon written, or written and oral, examination to be prescribed by the Board his knowledge of pesticides, their usefulness and their hazards; his competence as a pesticide dealer; and his knowledge of the laws and regulations governing the use and sale of pesticides.

(c) The Board shall by regulation:

- (1) Designate what persons or class of persons shall be required to pass the examination in the case of a pesticide dealer operating more than one location, and in the case of an applicant that is a corporation or other organized group;

(2) Provide for renewal license examinations at intervals not more frequent than four years.

"§ 143-450. Employees of pesticide dealers; registration; dealer's responsibility.--(a) Every licensed pesticide dealer shall submit to the Board with each application for an original or renewal license the names of all persons employed by him who sell or recommend 'restricted use pesticides.'

(b) Within thirty days of employment as such, every employee or agent of a licensed pesticide dealer who sells or recommends restricted use pesticides shall be registered with the Board. No person required to secure such registration shall sell or recommend restricted use pesticides without being registered, nor shall any pesticide dealer employ any unregistered person who is required by this section to be registered. The Board shall issue an identification card for each registered employee for an annual fee of \$1.00.

(c) Each pesticide dealer shall be responsible for the actions of every person who acts as his employee or agent in the solicitation or sale of pesticides, and in all claims and recommendations for use or application of pesticides.

"§ 143-451. Denial, suspension, revocation of license.--(a) The Board may suspend for not longer than ten days, pending inquiry, and, after opportunity for a hearing, the Board may deny, suspend, revoke, or modify the provision of any license issued under this Part, if it finds that the applicant or licensee or his registered employee has committed any of the following acts, each of which is declared to be a violation of this Part:

- (1) Made false or fraudulent claims through any media, misrepresenting the effect of materials or methods to be utilized or sold;
- (2) Made a pesticide recommendation not in accordance with the label registered pursuant to this Article;
- (3) Violated any provision of this Article or of any rule or regulation adopted by the Board or of any lawful order of the Board;
- (4) Failed to pay the original or renewal license fee when due, and continued to sell restricted use pesticides without paying the license fee, or sold restricted use pesticides without a license;
- (5) Was guilty of gross negligence, incompetency or misconduct in acting as a pesticide dealer;
- (6) Refused or neglected to keep and maintain the records required by this Article, or to make reports when and as required;
- (7) Made false or fraudulent records, invoices, or reports;
- (8) Used fraud or misrepresentation in making an application for a license or renewal of a license, or in selling or offering to sell restricted use pesticides;
- (9) Refused or neglected to comply with any limitations or restrictions on or in a duly issued license or permit;
- (10) Aided or abetted a licensed or an unlicensed person to evade the provisions of this Article, combined

or conspired with such a licensed or unlicensed person to evade the provisions of this Article, or allowed one's license to be used by an unlicensed person;

(11) Impersonated any state, county, or city inspector or official;

(12) Stored or disposed of containers or pesticides by means other than those prescribed on the label or adopted regulations.

(b) Any licensee whose license is revoked under the provisions of this Article shall not be eligible to apply for a new license hereunder until two years have elapsed from the date of the order revoking said license, or if an appeal is taken from said order or revocation, two years from the date of the order or final judgment sustaining said revocation.

"Part 4. Pesticide Applicators and Consultants

"§ 143-452. Licensing of pesticide applicators; fees.--(a) No person shall engage in the business of pesticide applicator within this State at any time unless he is licensed annually as a pesticide applicator by the Board.

(b) Applications for a pesticide applicator license shall be in the form and shall contain the information prescribed by the Board. Each application shall be accompanied by a fee of \$50.00 for each pesticide applicator's license and in addition an annual inspection fee of \$10.00 for each aircraft to be licensed and \$5.00 for each piece of ground equipment to be licensed. Should any equipment fail to pass inspection, making it necessary for a second inspection to be made, the Board shall require an added

inspection fee in the same amount as the original fee. In addition to the required inspection, unannounced inspections may be made without charge to determine if equipment is properly calibrated and maintained in conformance with laws and regulations. All licensed equipment shall be identified by a license plate or decal furnished by the Board, at no cost to the licensee, which plate or decal shall be affixed in a location and manner upon such equipment as prescribed by the Board.

(c) If the application for renewal of any license provided for in this Part is not filed prior to January 1 in any year, a penalty fee of 25% shall be assessed and added to the original fee and shall be paid by the applicant before the renewal license shall be issued.

(d) The Board shall classify licenses to be issued under this Part. Separate classifications shall be specified for ground and aerial methods used by any licensee to apply pesticides, and may include such further classifications and subclassifications as the Board considers appropriate. For aerial applications, a license shall be required both for the contractor and the pilot. Each classification shall be subject to separate testing procedures and requirements.

(e) Every licensed pesticide applicator who changes his address shall immediately notify the Board.

(f) If the Board finds the applicant qualified to apply pesticides in the classifications he has applied for and, if the applicant files the bond or insurance required under G.S. 143-467, and if the applicant applying for a license to engage in aerial application of pesticides has met all of the requirements

of the Federal Aviation Agency to operate the equipment described in the application, the Board shall issue a pesticide applicator's license limited to the classifications for which he is qualified. Every such license shall expire at the end of the calendar year of issue unless it has been revoked or suspended prior thereto by the Board for cause, or unless such financial security required under G.S. 143-467 is dated to expire at an earlier date, in which case said license shall be dated to expire upon expiration date of said financial security. The license may restrict the applicant to the use of a certain type or types of equipment or pesticides or to certain areas if the Board finds that the applicant is qualified to use only such type or types. If a license is not issued as applied for, the Board shall inform the applicant in writing of the reasons therefor.

(g) A pesticide applicator's license shall not be transferable. When there is a transfer of ownership, management, or operation of a business of a licensee hereunder, the new owner, manager, or operator (as the case may be) whether it be an individual, firm, partnership, corporation, or other entity, shall have 90 days from such sale or transfer, or until the next meeting of the Board following the expiration of said 90-day period, to have a qualified licensee to operate said business.

(h) Any licensee whose license is lost or destroyed may secure a duplicate license for a fee of \$2.00.

"§ 143-453. Qualifications for pesticide applicator's license; examinations.--(a) An applicant for a license must present satisfactory evidence to the Board concerning his qualifications for such license. The basic qualifications shall be:

- (1) Two years as an employee or owner-operator in the field of pesticide application. One or more years training in specialized pesticide application and control of pests under university or college supervision may be substituted for practical experience. Each year of such training may be substituted for one year of practical experience; or
- (2) A degree from a recognized college or university with training in entomology, sanitary or public health engineering, plant pathology, weed science or related subjects, including sufficient practical experience in pesticide application under proper supervision.

(b) Each applicant shall satisfy the Board as to his knowledge of the laws and regulations governing the use and application of pesticides in the classifications he has applied for (manually or with various equipment that he may have applied for a license to operate), and as to his responsibility in carrying on the business of a pesticide applicator. Each applicant for an original license must demonstrate upon written, or written and oral, examination to be prescribed by the Board his knowledge of pesticides, their usefulness and their hazards; his competence as a pesticide applicator; and his knowledge of the laws and regulations governing the use and application of pesticides in the classification for which he has applied.

(c) The Board shall by regulation:

(1) Designate what persons or class of persons shall be required to pass the examination in the case of an applicant that is a corporation;

(2) Provide for license renewal examinations at intervals not more frequent than four years.

"§ 143-454. Solicitors, salesmen and operators; registration; applicator's responsibility.--(a) Every licensed pesticide applicator shall submit to the Board with each application for an original or renewal license the names of all solicitors, salesmen and operators employed by him.

(b) Within 30 days of employment as such, the names of all solicitors, salesmen, or operators shall be registered with the Board. The applicator shall pay a registration fee of \$1.00 for each name registered, which fee shall accompany the registration. All registrations expire when a license expires. Each employee of a licensee for whom registration is made and registration fee paid shall be issued an identification card which shall be carried on the person of the employee at all times when performing work under this Part. An identification card shall be renewed annually by payment of a renewal fee of \$1.00. An identification card shall be displayed upon demand to the Board or its authorized representative. When an identification card is lost or destroyed, the licensee shall secure a duplicate identification card for which he shall pay a fee of \$1.00.

(c) It shall be unlawful for a solicitor, salesman, or operator to engage in the performance of any work covered by this Article without having first secured and in his possession an identification card. It shall be unlawful for a licensee to

direct or procure any solicitor, salesman, or operator to engage in the performance of any work covered by this Article without having first applied for an identification card for such employee or agent; provided, however, that the licensee shall have 30 days after employing a solicitor, salesman, or operator within which to apply for an identification card.

(d) Each licensed pesticide applicator shall be responsible for solicitors, salesmen, and operators in his employment to assure that pesticides are used in a manner consistent with the intent of this Article.

"§ 143-455. Pest control consultant license.--(a) No person shall perform services as a pest control consultant without first procuring from the Board a license. Applications for a consultant license shall be in the form and shall contain the information prescribed by the Board. The application for a license shall be accompanied by an annual fee of \$25.00.

(b) An applicant for a consultant license must present satisfactory evidence to the Board concerning his qualifications for such license. The basic qualifications shall be:

- (1) Two years of experience in the field of pesticide consulting, or in such related field or fields as the Board may deem an acceptable equivalent. One or more years training in specialized pesticide consultation or such related fields as the Board may deem an acceptable equivalent, under university or college supervision, may be substituted for practical experience. Each year of such training

may be substituted for one year of practical experience; or

- (2) A degree from a recognized college or university with training in entomology, sanitary or public health engineering, plant pathology, weed science or related subjects, including sufficient practical experience in pesticide application under proper supervision.

(c) Each applicant shall satisfy the Board as to his responsibility in carrying on the business of a pesticide consultant. Each applicant for an original license must demonstrate upon written, or written and oral, examination to be prescribed by the Board his knowledge of pesticides, their usefulness and their hazards; his competence as a pesticide consultant; and his knowledge of the laws and regulations governing the use and sale of pesticides.

(d) Pest control consultants shall be subject to the same provisions as pesticide applicators concerning penalties for late applications for license, changes of address, transferability of licenses, periodic re-examination, and examinations for corporate applicants.

"§ 143-456. Denial, suspension, revocation of license.--(a) The Board may suspend for not longer than ten days pending inquiry by the Commissioner, and, after opportunity for a hearing, the Board may deny, suspend, revoke, or modify the provisions of any license issued under this Part, if it finds that the applicant or licensee or his registered employee has

committed any of the following acts, each of which is declared to be a violation of this Part:

- (1) Made false or fraudulent claims through any media, misrepresenting the effect of materials or methods to be utilized;
- (2) Made a pesticide recommendation or application not in accordance with the label registered pursuant to this Article;
- (3) Operated faulty or unsafe equipment;
- (4) Operated in a faulty, careless, or negligent manner;
- (5) Violated any provision of this Article or of any rule or regulation adopted by the Board or any lawful order of the Board;
- (6) Refused or neglected to keep and maintain the records required by this Article, or to make reports when and as required;
- (7) Made false or fraudulent records, invoices, or reports;
- (8) Engaged in the business of application of a pesticide without having a registered operator in direct "on-the-job" supervision;
- (9) Operated unlicensed equipment;
- (10) Used fraud or misrepresentation in making an application for a license or renewal of a license;
- (11) Refused or neglected to comply with any limitations or restrictions on or in a duly issued license or permit;

- (12) Aided or abetted a licensed or an unlicensed person to evade the provisions of this Article, combined or conspired with such a licensed or unlicensed person to evade the provisions of this Article, or allowed one's license to be used by an unlicensed person;
- (13) Made false or misleading statements during or after an inspection concerning any infestation or infection of pests found on land;
- (14) Impersonated any state, county, or city inspector or official;
- (15) Stored or disposed of containers or pesticides by means other than those prescribed on the label or adopted regulations;
- (16) Failed to pay the original or renewal license fee when due and continued to operate as an applicator, or applied pesticides without a license.

(b) Any licensee whose license is revoked under the provisions of this Article shall not be eligible to apply for a new license hereunder until two years have elapsed from the date of the order revoking said license, or if an appeal is taken from said order or revocation, two years from the date of the order or final judgment sustaining said revocation.

"§ 143-457. Damaged person must file report of loss; contents; time for filing; effect of failure to file.--(a) Any person claiming damages from pesticide application shall have filed with the Board a written statement claiming that he has been damaged, on a form prescribed by the Board within 60 days after the date

that damages occurred, or prior to the time that 25% of a crop damaged shall have been harvested. Such statement shall contain, but shall not be limited thereto, the name of the person responsible for the application of said pesticide, the name of the owner or lessee of the land on which the crop is grown and for which damages are claimed and the date on which it is alleged that the damage occurred. The Board shall prepare a form to be furnished to persons to be used in such cases and such form shall contain such other requirements as the Board may deem proper. The Board shall, upon receipt of such statement, notify the licensee and the owner or lessee of the land or other person who may be charged with the responsibility, for the damages claimed, and furnish copies of such statements as may be requested.

(b) The filing of such report or the failure to file such a report need not be alleged in any complaint which might be filed in a court of law, and the failure to file the report shall not be considered any bar to the maintenance of any criminal or civil action. The failure to file such a report shall not be a violation of this Article. However, if the person failing to file such a report is the only one injured from such use or application of a pesticide by others, the Board may, when in the public interest, refuse to hold a hearing for the denial, suspension, or revocation of a license or permit issued under this Article until such report is filed. Where damage is alleged to have been done, the claimant shall permit the licensee and his representatives, such as bondsman or insurer, to observe within reasonable hours the lands or nontarget organism alleged to have been damaged in order that such damage may be examined. Failure

of the claimant to permit such observation and examination of the damaged lands shall automatically bar the claim against the licensee.

"§ 143-458. Rules and regulations concerning methods of application.--(a) The Board shall have authority to issue regulations after notice and hearing as provided by G.S. 143-463 to carry out the provisions and purpose of this Part and in such regulations may prescribe methods to be used in the application of pesticides. Where the Board finds that such regulations are necessary to carry out the provisions of this Part, such regulations may relate to the time, place, manner, and method of application of the pesticides, may restrict or prohibit sale and use of pesticides in designated areas during specified periods of time and shall encompass all reasonable factors which the Board deems necessary to prevent damage or injury by drift or misapplication to:

- (1) Plants, including forage plants, on adjacent or nearby land;
- (2) Wildlife in the adjoining or nearby areas;
- (3) Fish and other aquatic life in waters in reasonable proximity to the area to be treated; or
- (4) Other animals, persons or beneficial insects.

In issuing such regulations, the Board shall give consideration to pertinent research findings and recommendations of other agencies of this State or of the federal government.

(b) The Board may by regulation require that notice of a proposed application of a pesticide be given to land owners adjoining the property to be treated or in the immediate vicinity

thereof, if it finds that such notice is necessary to carry out the purpose of this Article.

"§ 143-459. Reporting of shipments and volumes of pesticides.-Every manufacturer and wholesaler of pesticides shall file with the Board in such form as the Board may prescribe monthly reports of purchases, sales and shipments of pesticides. The monthly report shall be filed with the Board on or before the fifteenth day of the month next succeeding the purchase, sale or shipment. Failure to file any report when due shall be cause for suspension or revocation of any license or registration issued under this Article, or for denial of the issuance or renewal of any such license or registration, and shall be a misdemeanor, punishable as provided by G.S. 143-469. The time for reporting may be extended for an additional fifteen days for cause, upon written request to the Board. All reports provided under this Part are provided solely for the purposes of the Board.

"Part 5. General Provisions

"§ 143-460. Definitions.--As used in this Article, unless the context otherwise requires:

(1) The term 'active ingredient' means

- a. In the case of a pesticide other than a plant regulator, defoliant, or desiccant, an ingredient which will prevent, destroy, repel, or mitigate insects, nematodes, fungi, rodents, weeds, or other pests;
- b. In the case of a plant regulator, an ingredient which, through physiological action, will accelerate or retard the rate of growth or rate of

maturation or otherwise alter the behavior of ornamental or crop plants or the produce thereof;

c. In the case of a defoliant, an ingredient which will cause the leaves or foliage to drop from a plant;

d. In the case of a desiccant, an ingredient which will artificially accelerate the drying of a plant tissue.

(2) The term 'adulterated' shall apply to any pesticide if its strength or purity falls below the professed standard or quality as expressed on labeling or under which it is sold, or if any substance has been substituted wholly or in part for the article, or if any valuable constituent of the article has been wholly or in part abstracted.

(3) The term 'antidote' means the most practical immediate treatment in case of poisoning and includes first aid treatment.

(4) 'Board' means the North Carolina Pesticide Board.

(5) 'Commissioner' means the North Carolina Commissioner of Agriculture.

(6) 'Committee' means the Advisory Committee on Pesticides.

(7) The term 'defoliant' means any substance or mixture of substances intended for causing the leaves or foliage to drop from a plant, with or without causing abscission.

(8) The term 'desiccant' means any substance or mixture of substances intended for artificially accelerating the drying of plant tissues.

(9) The term 'device' means any instrument or contrivance intended for trapping, destroying, repelling, or mitigating

insects or rodents or destroying, repelling, or mitigating fungi, weeds, nematodes, or such other pests as may be designated by the Board, but not including equipment used for the application of pesticides when sold separately therefrom.

(10) 'Engage in business' means any sale or application of pesticide by any person for use upon lands of another.

(11) 'Equipment' means any type of ground, water or aerial equipment, device, or contrivance using motorized, mechanical or pressurized power and used to apply any pesticide on land and anything that may be growing, habitating or stored on or in such land, but shall not include any pressurized hand-sized household device used to apply any pesticide or any equipment, device or contrivance of which the person who is applying the pesticide is the source of power or energy in making such pesticide application.

(12) The term 'fungi' means all nonchlorophyll-bearing thallophytes (that is, all nonchlorophyll-bearing plants of a lower order than mosses and liverworts), for example, rusts, smuts, mildews, molds, yeasts, and bacteria, except those on or in living man or other animals.

(13) The term 'herbicide' means any substance or mixture of substances intended for preventing, destroying, repelling or mitigating any weed.

(14) The term 'inert ingredient' means an ingredient which is not an active ingredient.

(15) The term 'ingredient statement' means

- a. A statement of the name and percentage of each active ingredient, together with the total

percentage of the inert ingredients, in the pesticide; and

- b. In case the pesticide contains arsenic in any form, a statement of the percentages of total and water soluble arsenic, each calculated as elemental arsenic.

(16) The term 'insect' means any of the numerous small invertebrate animals generally having the body more or less obviously segmented, for the most part belonging to the class Insecta, comprising six-legged, usually winged forms, as, for example, beetles, bugs, bees, flies, and to other allied classes of arthropods whose members are wingless and usually have more than six legs, as, for example, spiders, mites, ticks, centipedes, and wood lice.

(17) The term 'insecticide' means any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any insects which may be present in any environment whatsoever.

(18) The term 'label' means the written, printed, or graphic matter on, or attached to, the pesticide (or device) or the immediate container thereof, and the outside container or wrapper of the retail package, if any there be, of the pesticide (or device).

(19) The term 'labeling' means all labels and other written, printed, or graphic matter:

- a. Upon the pesticide (or device) or any of its containers or wrappers;

- b. Accompanying the pesticide (or device) at any time;
- c. To which reference is made on the label or in literature accompanying the pesticide (or device) except when accurate, non-misleading reference is made to current official publications of the United States Department of Agriculture or Interior, the United States Public Health Service, state experiment stations, state agricultural colleges, or other similar Federal institutions or official agencies of this State or other states authorized by law to conduct research in the field of pesticides.

(20) 'Land' means all land and water areas, including airspace, and all plants, animals, structures, buildings, devices and contrivances, appurtenant thereto or situated thereon, fixed or mobile, including any used for transportation.

(21) 'Manufacturer' includes any person engaged in the business of importing, producing, preparing, formulating, mixing, or processing pesticides.

(22) The term 'misbranded' shall apply:

- a. To any pesticide or device if its labeling bears any statement, design, or graphic representation relative thereto or to its ingredients which is false or misleading in any particular;
- b. To any pesticide--
 - 1. If it is an imitation of or is offered for sale under the name of another pesticide;

2. If its labeling bears any reference to registration under this Article;
3. If the labeling accompanying it does not contain instructions for use which are necessary and, if complied with, adequate for the protection of the public;
4. If the label does not contain a warning or caution statement which may be necessary and, if complied with, adequate to prevent injury to living man and other vertebrate animals;
5. If the label does not bear an ingredient statement on that part of the immediate container and on the outside container or wrapper, if there be one, through which the ingredient statement on the immediate container cannot be clearly read, or the retail package which is presented or displayed under customary conditions of purchase except that the Board may permit the statement to appear prominently on some other part of the container, if the size or form of the container make it impractical to comply with the requirements of this subparagraph;
6. If any word, statement, or other information required by or under the authority of this Article to appear on the labeling is not prominently placed thereon with such conspicuousness (as compared with other words,

statements, designs, or graphic matter in the labeling) and in such terms as to render it likely to be read and understood by the ordinary individual under customary conditions of purchase and use; or

7. If in the case of an insecticide, nematocide, fungicide, or herbicide, when used as directed or in accordance with commonly recognized practice, it shall be injurious to living man or other vertebrate animals or vegetation, except weeds, to which it is applied, or to the person applying such pesticides or
8. In the case of a plant regulator, defoliant, or desiccant when used as directed it shall be injurious to living man or other vertebrate animals, or vegetation to which it is applied, or to the person applying such pesticides, except that physical or physiological effects on plants or parts thereof shall not be deemed to be injury, when this is the purpose for which the plant regulator, defoliant, or desiccant was applied, in accordance with the label claims and recommendations.

(23) The term 'nematicide' means any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating nematodes.

(24) The term 'nematode' means invertebrate animals of the phylum nemathelminthes and class Nematoda, that is, unsegmented

round worms with elongated, fusiform, or saclike bodies covered with cuticle, and inhabiting soil, water, plants or plant parts; may also be called nemas or eelworms.

(25) A 'person' is any person, including (but not limited to) an individual, firm, partnership, association, company, joint stock association, public or private institution, municipality or county or local government unit (as defined in G.S. 143-215.40(b)), state or Federal governmental agency, or private or public corporation organized under the laws of this State or the United States or any other state or country.

(26) 'Pest control consultant' means any person, who, for a fee, offers or supplies technical advice, supervision, or aid, or recommends the use of specific pesticides for the purpose of controlling insects, plant diseases, weeds, and other pests.

(27) The term 'pesticide' means

- a. Any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any insects, rodents, nematodes, fungi, weeds, or other forms of plant or animal life or viruses, except viruses on or in living man or other animals, which the Board shall declare to be a pest, and
- b. Any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant.

(28) 'Pesticide applicator' means any person who owns or manages a pesticide application business which is engaged in the business of applying pesticides upon the lands of another. It includes public operators, but does not include:

- a. Any person applying pesticides for himself with ground equipment who (i) operates and maintains pesticide applicator equipment primarily for his own use; (ii) is not regularly engaged in the business of applying pesticides for hire amounting to a principal or regular occupation; (iii) does not publicly hold himself out as a pesticide applicator; and (iv) operates his pesticide applicator equipment only in the vicinity of his own property and for the accommodation of his neighbors.
- b. Any person regulated by the North Carolina Structural Pest Control Law (General Statutes Chapter 106, Article 4C.)

(29) The term 'pesticide dealer' means any person who is engaged in the business of distributing, selling, offering for sale, or holding for sale restricted use pesticides for distribution directly to users. The term pesticide dealer does not include:

- a. Persons whose sales of pesticides are limited to pesticides in consumer-sized packages (as defined by the Board) which are labeled and intended for home and garden use only and are not restricted use pesticides, or
- b. Practicing veterinarians and physicians who prescribe, dispense, or use pesticides in the performance of their professional services.

(30) 'Pesticide operator' means a person who is employed or directly supervised by a pesticide applicator, and who in turn either

- a. Directly supervises activities in the field including recommending controls, handling, mixing, and applying pesticides in the field, and the disposal of waste, excess materials, or containers, or
- b. Is the sole employee engaged in such activities.

(31) The term 'plant regulator' means any substance or mixture of substances, intended through physiological action, for accelerating or retarding the rate of growth or rate of maturation, or for otherwise altering the behavior of ornamental or crop plants or the produce thereof, but shall not include substances to the extent that they are intended as plant nutrients, trace elements, nutritional chemicals, plant inoculants, and soil amendments.

(32) 'Public operator' means any person in charge of any equipment used by public utilities (as defined by General Statutes Chapter 62), state agencies, municipal corporations, or other governmental agencies applying pesticides.

(33) The term 'registrant' means the person registering any pesticide pursuant to the provisions of this Article.

(34) The term 'restricted use pesticide' means a pesticide which the Board has designated as such pursuant to G.S. 143-440 (a) (1) or (2).

(35) The term 'rodenticide' means any substance or mixture of substances intended for preventing, destroying, repelling,

attracting, or mitigating rodents or any other vertebrate animal which the Board shall declare to be a pest.

(36) The term 'weed' means any plant or part thereof which grows where not wanted.

(37) 'Wildlife' means all living things that are neither human, domesticated, nor, as defined in this Article, pests; including but not limited to mammals, birds, and aquatic life.

"§ 143-461. General powers of Board.--In addition to the specific powers prescribed elsewhere in this Article, and for the purpose of carrying out its duties, the Board shall have the power, at any time and from time to time:

(1) To adopt from time to time and to modify and revoke official regulations interpreting and applying the provisions of this Article and rules of procedure establishing and amplifying the procedures to be followed in the administration of this Article: provided, that no such regulations and no rules of procedure shall be effective nor enforceable until published and filed as prescribed by G.S. 143-463. Unless the Board deems there are overriding policy considerations involved, any regulation of the Board, which will in the judgment of the Board result in severe curtailment of the usefulness or value of inventories or equipment in the hands of persons licensed under this Article, should be given a future effective date so as to minimize undue potential economic loss to licensees;

(2) To authorize the Commissioner by proclamation to suspend or implement, in whole or in part, particular regulations of the Board which may be affected by variable conditions. All proclamations must state the hour and date upon which they become

effective and must be issued at least forty-eight hours in advance of the effective date and time. The Commissioner must keep a permanent file of the texts of proclamations issued by him, and furnish upon request certified copies of any proclamation for use in evidence in any civil or criminal proceeding in which the text of a proclamation may be in issue. Proclamations need not be filed with the Secretary of State or with any clerk of court. The Commissioner must make every reasonable effort to give actual notice of the terms of any proclamation to the persons who may be affected thereby;

(3) To conduct such investigations as it may reasonably deem necessary to carry out its duties as prescribed by this Article;

(4) To conduct public hearings in accordance with the procedures prescribed by this Article;

(5) To delegate such of the powers of the Board as the Board deems necessary (other than its powers to adopt rules and regulations of any kind) to one or more of its members, to the Commissioner, or to any qualified employee of the Board or of the Commissioner; provided, that the provisions of any such delegation of power shall be set forth in the official regulations of the Board. Any person to whom a delegation of power is made to conduct a hearing shall report the hearing with its evidence and record to the Board for decision;

(6) To call upon the Attorney General for such legal advice and assistance as is necessary to the functioning of the Board;

(7) To institute such actions in the superior court in the county in which any defendant resides, or has his or its principal place of business, as the Board may deem necessary for

the enforcement of any of the provisions of this Article or of any official actions of the Board, including proceedings to enforce subpoenas or for the punishment of contempt of the Board. Upon violation of any of the provisions of this Article, or of any regulation of the Board adopted under the authority of this Article the Board may, either before or after the institution of any other proceedings (civil or criminal), institute a civil action in the superior court in the name of the State for injunctive relief to restrain the violation and for such other or further relief in the premises as said court shall deem proper. Neither the institution of the action nor any of the proceedings thereon shall relieve any party to such proceedings from any other penalty or remedy prescribed by this Article for any violation of same;

(8) To agree upon or enter into any settlements or compromises of any actions and to prosecute any appeals or other proceedings.

"§ 143-462. Procedures for revocations and related actions affecting licenses.--In all proceedings, the effect of which would be to revoke, suspend, deny, or withhold renewal of a license issued under Part 3 or Part 4 of this Article, or to deny permission to take an examination for such a license, the provisions of G.S. Chapter 150 (Uniform Revocation of Licenses) shall be applicable.

"§ 143-463. Procedures for adoption of certain rules and regulations; publication of rules and regulations.--(a) Prior to the adoption by the Board of rules or regulations authorized by G.S. 143-440 ('Restricted use of pesticides regulated'), G.S. 143-441 ('Handling, storage and disposal of pesticides'), or G.S.

143-458 ('Rules and regulations concerning methods of application'), the Board shall conduct one or more public hearings with respect to any such proposed action, in accordance with the procedures prescribed by subsection (b) of this section.

(b) The following provisions shall apply to the public hearings required by subsection (a) of this section:

- (1) Notice of any such hearing shall be given not less than 20 days before the date of such hearing and shall state the date, time, and place of hearing, the subject of the hearing, and the action which the Board proposes to take. The notice shall either include details of such proposed action, or where such proposed action is too lengthy for publication, as hereinafter provided for, the notice shall specify that copies of such detailed proposed action can be obtained on request from the office of the Board in sufficient quantity to satisfy the requests of all interested persons.
- (2) Any such notice shall be published at least once in one newspaper of general circulation in the State, and a copy of such notice shall be mailed to each person on the mailing list required to be kept by the Board pursuant to the provisions of G.S. 143-464.
- (3) Any person who desires to be heard at any such public hearing shall give notice thereof in writing to the Board on or before the first date set for the hearing. The Board is authorized to set

reasonable time limits for the oral presentation of views by any one person at any such public hearing. The Board shall permit anyone who so desires to file a written argument or other statement with the Board in relation to any proposed action of the Board any time within 30 days following the conclusion of any public hearing or within any such additional time as the Board may allow by notice given as prescribed in this section.

(c) Upon completion of hearings and consideration of submitted evidence and arguments with respect to any proposed action of the Board pursuant to this section, the Board shall adopt its final action with respect thereto and shall publish such final action as part of its official regulations.

(d) The Board is empowered to modify or revoke from time to time any final action previously taken by it pursuant to the subjects referred to in subsection (a); any such modification or revocation, however, to be subject to the procedural requirements of this section.

(e) All official acts of the Board which have or are intended to have general application effect shall be incorporated either in the Board's official regulations (applying and interpreting this Article), or in its rules of procedure. All such regulations and rules shall upon adoption thereof by the Board be printed (or otherwise duplicated), and a duly certified copy thereof shall immediately be filed with the Secretary of State. One copy of each such action shall at the same time be mailed to all persons then on the mailing list, and additional copies shall

at all times be kept at the office of the Board in sufficient numbers to satisfy all reasonable requests therefor. The Board shall codify its regulations and rules and from time to time shall revise and bring up to date such codifications.

"§ 143-464. Procedures with respect to registration of pesticides and certain other matters: mailing list; seal; judicial review.--(a) In any proceeding wherein an application for registration of a pesticide is refused or the Board proposes to suspend or cancel a registration, the Board shall give notice with respect to all steps of the proceeding only to each person directly affected by such proceedings who shall be made a party thereto. The Board shall also apprise all persons on its mailing list on the date when the action is taken of all of its official acts (such as the adoption of regulations or rules of procedure) which have, or are intended to have general application and effect. It shall be the duty of the Board to keep such a mailing list on which it shall record the name and address of each person who requests listing thereon, together with the date of receipt of such request. Any person may, by written request to the Board, ask to be permanently recorded on such mailing list.

(b) All notices which are required to be given by the Board or by any party to a proceeding shall be given by regular mail to all persons entitled thereto, including the Board. The certificate of the person designated by the Board to mail such notices that the notices were mailed, giving the mailing date, shall be conclusive in the absence of fraud. Notice by the Board may be given to any person upon whom a summons may be served in accordance with the provisions of law covering civil actions in

the superior courts of this State. Any notice shall be sufficient if it reasonably sets forth the action requested or demanded or gives information as to action taken. The Board by its rules of procedure may prescribe other necessary practices and procedures with regard to the form, content and procedure as to any particular notices.

(c) The following provisions, together with any additional provisions not inconsistent herewith which the Board may prescribe, shall be applicable in connection with hearings pursuant to this Article, except where other provisions are applicable in connection with specific types of hearings:

- (1) Any hearing held pursuant to G.S. 143-442 whether called at the instance of the Board or of any person, shall be held upon not less than 30 days' written notice given by the Board to any person who is, or is entitled to be, a party to the proceedings with respect to which such hearing is to be held, unless a shorter notice is agreed upon by all such parties.
- (2) All hearings shall be before the Board or its authorized agent or agents, and the hearing shall be open to the public. The Board, or its authorized agents, shall have the authority to administer oaths.
- (3) A full and complete record of all proceedings at any hearing shall be taken by a reporter appointed by the Board or by some other method approved by the Attorney General. Any party to a proceeding

shall be entitled to a copy of such record upon the payment of the reasonable cost thereof as determined by the Board.

- (4) The Board shall follow generally the procedures applicable in civil actions in the superior court insofar as practicable, including rules and procedures with regard to the taking and use of depositions, the making and use of stipulations, and the entering into of agreed settlements and consent orders.
- (5) Subpoenas or subpoenas duces tecum issued by the Board, in connection with any hearing, shall be directed to any officer authorized by law to serve process, and the further procedures and rules of law applicable with respect thereto shall be prescribed in connection with subpoenas to the same extent as if issued by a court of record. In case of a refusal to obey a notice of hearing or subpoena issued by the Board, application may be made to the superior court of the appropriate county for enforcement thereof.
- (6) The burden of proof at any hearing shall be upon the person or the Board, as the case may be, at whose instance the hearing is being held.
- (7) Without regard to paragraph (6) of this subsection, the burden of proof to justify the safety of any pesticide shall be upon the applicant for

registration or for licenses or permits to use, apply or sell pesticides.

- (8) No decision or order of the Board shall be made in any proceeding unless the same is supported by competent, material and substantial evidence upon consideration of the whole record.
- (9) Following any hearing, the Board shall afford the parties thereto a reasonable opportunity to submit within such time as prescribed by the Board proposed findings of fact and conclusions of law and any brief in connection therewith. The record in the proceeding shall show the Board's ruling with respect to each such requested finding of fact and conclusion of law.
- (10) All orders and decisions of the Board shall set forth separately the Board's findings of fact and conclusions of law and shall, wherever necessary, cite the appropriate provision of law or other source of authority on which any action or decision of the Board is based.
- (11) The Board shall have the authority to adopt a seal which shall be the seal of said Board and which shall be judicially noticed by the courts of the State. Any document, proceeding, order, decree, special order, rule, regulation, rule of procedure or any other official act or records of the Board or its minutes may be certified by the Chairman or Secretary of the Board under his hand and the seal

of the Board and when so certified shall be received in evidence in all actions or proceedings in the courts of the State without further proof of the identity of the same if such records are competent, relevant and material in any such action or proceeding. The Board shall have the right to take judicial notice of all studies, reports, statistical data or any other official reports or records of the federal government or of any sister state and all such records, reports and data may be placed in evidence by the Board or by any other person or interested party where material, relevant and competent.

(d) Any person who is aggrieved by a final decision of the Board in any matter shall have a right of appeal to the superior court pursuant to the provisions of Article 33 of G.S. Chapter 143.

"§ 143-465. Reciprocity; intergovernmental cooperation.--(a) The Board may issue any license required by this Article on a reciprocal basis with other states without examination to a non-resident who is licensed in another state substantially in accordance with any of the provisions of the Article, provided that financial security as provided for in G.S. 143-467 is met.

(b) The Board may cooperate or enter into formal agreements with any other agency of this State or its subdivisions or with any agency of any other state or of the federal government for the purpose of enforcing any of the provisions of this Article.

(c) In order to avoid confusion resulting from diverse requirements and to avoid increased costs to the people of this State due to the necessity of complying with such diverse requirements in the manufacture and sale of such pesticides, it is desirable that there should be uniformity between the requirements of the several states and the federal government relating to such pesticides. To this end the Board is authorized, after public hearing, to adopt by regulation such regulations, applicable to and in conformity with the primary standards established by this Article, as have been or may be prescribed with respect to pesticides by departments or agencies of the United States government.

"§ 143-466. Records; information; inspection; enforcement.--

(a) The Board shall require licensees to maintain records with respect to the sale and application of such pesticides as it may from time to time prescribe. Such relevant information as the Board may deem necessary may be specified by regulation. Such records shall be kept for a period of three years from the date of the application of the pesticide to which such records refer, and shall be available for inspection by the Board or its agents at its request.

(b) The Board may publish information regarding injury which may result from improper application or use of pesticides and the methods and precautions designed to prevent such injury.

(c) The Board may provide for inspection of any equipment used for application of pesticides and may require repairs or other changes before its further use for pesticide application. A list

of requirements that equipment shall meet may be adopted by the Board by regulation.

(d) The Board may provide for inspection of any place of business where pesticides are stored or sold and may require changes in methods of handling and storage of all pesticides. A list of requirements that places of business must meet may be adopted by regulation of the Board.

(e) For the purpose of carrying out the provisions of this Article, inspectors designated by the Board may enter upon any public or private premises at reasonable times, in order:

- (1) To have access for the purpose of inspecting the premises and any equipment subject to this Article and such premises on which such equipment is kept or stored;
- (2) To inspect lands actually or reported to be exposed to pesticides;
- (3) To inspect storage or disposal areas;
- (4) To inspect or investigate complaints of injury to humans, land or plants; or
- (5) To sample pesticides being applied, or to be applied.

No person shall refuse entry or access to any authorized representative of the Board who requests entry for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper or interfere with any such representative while in the process of carrying out his official duties. Should the Board or its designated agent be denied access to any land where such access was sought for the purposes

set forth in this Article, the Board may apply to any court of competent jurisdiction for a search warrant authorizing access to such land for said purposes. The court may upon such application issue the search warrant for the purposes requested.

"§ 143-467. Financial responsibility.--(a) The Board may require from a licensee or an applicant for a license under this Article evidence of his financial ability to properly indemnify persons suffering damage from the use or application of pesticides, in the form of a surety bond, liability insurance or cash deposit. The amount of this bond, insurance or deposit shall be determined by the Board, in light of the risk of damage. The indemnification requirements may extend to damage to persons and property from equipment used (including aircraft).

(b) The Board may also require a reasonable performance bond with satisfactory surety to secure the performance of contractual obligations of the licensee, with respect to application of pesticides. Any person injured by the breach of any such obligation or any person damaged by pesticides or by equipment used in their application shall be entitled to sue on the bond in his own name in any court of competent jurisdiction to recover the damages he may have sustained.

(c) Any regulations adopted by the Board pursuant to G.S. 143-461 to implement this section may provide for such conditions, limitations and requirements concerning the financial responsibility required by this section as the Board deems necessary, including but not limited to notice of reduction or cancellation of coverage, deductible provisions, and acceptability of surety. Such regulations may classify financial

responsibility requirements according to the separate license classifications and subclassifications prescribed by the Board pursuant to G.S. 143-452 and the dealer category (Part 3 of this Article).

"§ 143-468. Disposition of fees.--All fees and charges received by the Board under this Article shall be deposited in the Department of Agriculture General Fund Budget for the purpose of administration and enforcement of this Article, with proper accounting procedures approved by the Board accounting for all expenditures and receipts.

"§ 143-469. Penalties.--Any person who shall be adjudged to have violated any provision of this Article, or any regulation of the Board adopted pursuant to this Article, shall be guilty of a misdemeanor, and for each violation shall be liable for a penalty of not less than one hundred (\$100.00) nor more than one thousand dollars (\$1,000) or shall be imprisoned for not more than 60 days, or both. In addition, if any person continues to violate or further violates any provision of this Article after written notice from the Board, the court may determine that each day during which the violation continued or is repeated constitutes a separate violation subject to the foregoing penalties.

"§ 143-470. Provisional or interim licenses.--The Board is hereby authorized to adopt regulations providing for the issuance of interim or provisional licenses to any or all categories of licensees under this Article. Such regulations, among other things, may waive any particular license requirements, may reduce any license qualification or requirement, and may provide for the phasing of the effectuation of any license requirement. No

interim or provisional license issued pursuant to this section shall have an expiration date later than December 31, 1973."

Sec. 2. G.S. 66-57 (Exemptions from Fair Trade Law) is hereby amended by adding thereto at the end thereof the following:

"This Article shall not apply to any prices offered in connection with or contracts or purchases respecting pesticides, as defined by G.S. 143-460."

Sec. 3. G.S. 150-9 (Definitions--Uniform Revocation of Licenses) is hereby amended by inserting therein after the word and punctuation "Examiners," the words "the North Carolina Pesticide Board", so as to add the North Carolina Pesticide Board to the list of agencies that are subject to the Uniform Revocation of Licenses Law (G.S. Chapter 150).

Sec. 4. The following acts, as amended, are hereby repealed as being obsolete under existing circumstances or unnecessary in light of provisions contained in this act: G.S. Chapter 106, Articles 4 (Insecticides and Fungicides), 4A (Insecticide, Fungicide and Rodenticide Act of 1947) and 4B (Aircraft Application of Pesticides).

Sec. 5. This act shall not be deemed to repeal the Structural Pest Control Act of North Carolina of 1955, as amended (G.S. Chapter 106, Article 4C).

Sec. 6. No provision of this act is intended, nor shall be construed, to affect in any way any rights or interests (whether public or private):

(a) Now vested or accrued, in whole or in part, the validity of which might be sustained or preserved by reference to any provisions of law repealed by this act;

(b) Derived from, or which might be sustained or preserved in reliance upon, action heretofore taken (including the adoption of ordinances or resolutions) pursuant to or within the scope of any provision of law so repealed.

Sec. 7. (a) Notwithstanding any other provision of law, all existing rules and regulations concerning pesticides of the North Carolina Department of Agriculture and of any other department or agency of the State of North Carolina, not inconsistent with the provisions of this act, shall continue in full force and effect until repealed, modified, or amended.

(b) No action or proceeding of any nature concerning pesticides (whether civil or criminal, judicial or administrative or otherwise) pending at the effective date of this act by or against or before the North Carolina Department of Agriculture or any other department or agency of the State of North Carolina shall be abated or otherwise affected by the adoption of this act.

Sec. 8. Severability.--If any provision of this act or the application thereof to any person or circumstances is held invalid, such invalidity shall not affect other provisions or applications of this act which can be given effect without the invalid provision or application, and to this end the provisions of this act are declared to be severable.

Sec. 9. The following provisions of this act shall be effective January 1, 1972: (a) Parts 3 and 4 of Article 52 of

G.S. Chapter 143, as added by this act; (b) G.S. 143-442 through 143-445, as added by this act; and (c) Sec. 4 of this act. The remainder of this act shall be effective July 1, 1971.

